

# Career and Technical Education

## Introduction

**Education Specialist Degree** This program is 36 semester credits beyond the master's degree. Two concentrations are available leading to an education specialist degree in industrial and vocational education: (1) industry and technology; and (2) professional education.

The program is for those who have a master's degree in technical education, industrial education, technology education, vocational education or equivalent. (*Equivalency meaning agriculture, business education, marketing education, family and consumer education, and trade and industrial education.*) It is also for those who have a master's degree and are a certified employee of a technical college or community college.

## Admission

Students seeking admission to the program should complete the following at least 30 days prior to the opening of the term in which they plan to begin their program.

1. File an Application for Admission.
2. Submit a current vita listing all pertinent biographical and educational data.
3. Present official transcripts of all college and university work completed certifying award of bachelor's and master's degrees in industrial education, industrial arts education, technology education, vocational education or an equivalent field with a cumulative grade point average of at least 3.25 on a four-point scale in all graduate work. Persons having master's degrees in other fields who are certified and employed in vocational-technical education are also eligible for admission. Transcripts need not be submitted for work completed at UW-Stout.
4. Provide evidence of at least two years of successful teaching experience and professional promise by requesting letters from at least two administrators or supervisors.

The Education Specialist Degree Program Committee, comprised of graduate faculty and an Ed. S. degree student, will review the candidate's credentials and make a recommendation relative to admission to the director of the Ed.S. degree program. The committee may recommend that certain standardized examinations be completed or that the candidate be interviewed by the committee. The director of the major will recommend admission with full or provisional status to the Graduate School.

After review of the application data, the Graduate School will assign program status and inform the student of it immediately.

- a. Full status will be granted to those who meet all admission requirements.
- b. Provisional status may be granted to those who do not fully qualify on some requirements. At the conclusion of the first term of enrollment, the status will be re-evaluated.
- c. Admission will be denied students whose qualifications do not meet the requirements and if the admissions committee decides provisional status is not warranted.

## Primary Evaluation Processes

The primary processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following program specific processes: application for admission; degree candidacy; final oral examination; and intent to graduate.

## Degree Program Supervision

For the first enrollment, the program director will aid in developing a class schedule in keeping with degree requirements. Prior to enrolling for a second term, the student will prepare a total program plan in keeping with degree requirements and the student's special needs.

At that time, the student will work with the program director to obtain a supervisory committee consisting of three members of the graduate faculty.

The committee will act on the appropriateness of the student's degree program, approve the proposed field study, administer the oral examination and recommend the award of the degree.

## Teaching Experience

This program is designed for people in education. It is felt that course work will be more significant for those who have some experience in teaching. Thus, no more than eight credits in the degree program may be completed prior to satisfying the requirement of two years of successful teaching experience.

## Requirements for the Ed.S. Degree

Prior to the award of the Ed.S. degree, the following requirements will be met:

1. Completion of an approved degree program of 36 semester credits with an overall grade point average of at least 3.25, and with a minimum of 18 credits which are at the graduate only level – 700 or 800 level.
2. Filing of an Intent to Graduate form at least seven weeks prior to the expected graduation date.
3. Completion of an oral examination on field study research prior to graduation.
4. Filing of an approved field study report and abstract at least one week prior to graduation.
5. Recommendation for the degree by the supervisory committee.
6. Approval of degree candidacy at the appropriate time.

## Industry and Technology Concentration

This concentration is designed for the graduate student desiring a broad educational experience leading to a professional career as a teacher of technology education, and industrial and technical subjects in high schools, vocational schools, technical colleges, junior colleges and universities.

Content for the advanced degree program will be drawn from three bodies of knowledge: (a) industry and technology; (b) applied research; and (c) professional education. Selection of these three components is based on the assumption that the holder of an advanced degree should be a scholar in the discipline (industry and technology), capable of solution of problems through applied research techniques (researcher), and a practicing educator.

## Curriculum

The Ed.S. degree with a concentration in industry and technology consists of three groups of courses and/or experiences as follows: industry and technology, applied research, and professional education. The industry and technology component consists of courses basic to the science of industry and technology and a field study. This component is intended to be flexible in order to afford candidates an opportunity to broaden themselves if their prior work has been narrow, or to study in depth a particular conceptual area of industry and technology if their prior work has been broad in nature. In this component, the advanced graduate student will have the opportunity to take additional physics, chemistry, mathematics, sociology, psychology and course work to develop a level of competence in one or two conceptual areas in their substantive teaching field. The Impacts of Technology course, required of all students in the program, permits the students to look at how their teaching area has had an effect on people and society. The culminating activity is a field study. The main purpose of the field study is to provide students with an opportunity to apply and synthesize the contents of their program. Education specialists are encouraged to select practical problems related to their professional appointment or, if not presently employed, to select a problem from their discipline.

The applied research component consists of course work in computer science, research design and procedures, and statistics. A holder of an advanced degree should have an intimate knowledge of research design, measurement and statistics, and a broad background in the problems associated with industrial and vocational education.

The professional education component consists of courses in the foundational areas of education and curriculum and instruction. There is a growing body of knowledge and research dealing with education and the instructional process. It is imperative that the education specialist be able to implement current innovative educational practices and thought into the curriculum and the teaching process.

The three components are shown here as they appear in the curriculum requirements for the degree.

## Program Plan

To qualify for the Ed.S. degree with a concentration in industry and technology requires that the student earn not less than 36 semester credits beyond the master's degree which will be distributed as follows:

### Industry and Technology

#### 16-20 credits

TECED-895	Field Study in Industry and Technology .....	2-6
TECH-733	Impacts of Technology .....	2-3
	<i>Selectives</i> .....	7-14

### Applied Research

#### 6-10 credits

CS-741	Computer Programming Techniques .....	2
EDUC-816	Instrumentation for Research .....	3
	<i>Selectives</i> .....	1-5

### Professional Education

#### 6-10 credits

PSYC-850	Psychology of Development .....	3
	<i>Selectives</i> .....	3-7

## Selectives

The student should confer with the program director in choosing selective credits to complete the 36-hour degree requirement. Students can specialize in one of several course sequences that we recommend in areas such as leadership, manufacturing, technology, program development and evaluation, training, or curriculum and instruction. There is considerable flexibility in the program with regard to selectives, and they may be taken as needed to fulfill the individual goals and objectives of the student.

## Professional Education Concentration

This concentration has been designed for the individual who is committed to additional depth in preparation as a professional educator in the areas of curriculum and instruction, and the supervision of instruction. Content for the advanced degree program will be drawn from three bodies of knowledge: (a) industry and technology; (b) applied research; and (c) professional education. Selection of these three components is based on the assumption that the holder of an advanced degree should be a practicing educator, capable of solving problems through applied research techniques, and a scholar within a discipline.

## Curriculum

The curriculum consists of three groups of courses and/or experiences as follows: industry and technology, applied research, and professional education (*curriculum and instruction, and the supervision of instruction*).

The industry and technology component consists of courses in the sciences basic to industry and technology (*math, computer science, sociology, psychology, communication and economics*), and the impacts of technology on society.

The applied research component consists of course work in management information systems, instrumentation for research, employment and training research, and planning. A holder of an advanced degree should have knowledge of research design, measurement and statistics, and an understanding of problems associated with industrial and vocational education.

The professional education component has two sub-components: curriculum and instruction, and the supervision of instruction. Curriculum and instruction involves the advanced graduate student in curriculum engineering, instructional systems, instructional strategies, structuring knowledge, principles of learning, guidance of learning activities, identification and determination of instructional content, and computer assisted instruction as related to technology, and industrial and vocational education. Supervision of instruction involves policy developments, cost analysis, cost effectiveness, program evaluation review techniques, accountability in education, decision making models, evaluation systems, improvement of instruction, financial aspects, coordination, leadership procedures, management information systems, and management techniques as related to industrial and vocational education. The culminating activity is a field study which is six semester credits of the total (16-20 credits) in this component. The field study provides the opportunity to put into practice some aspect of the program that will benefit both the student and the institutional setting where the student is employed or aspires to be employed.

## Program Plan

To qualify for the Ed.S. degree with a concentration in professional education, the student must earn not less than 36 semester credits beyond the master's degree, which will be distributed as follows:

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### Industry and Technology

#### 6-10 credits

TECH-733	Impacts of Technology .....	2-3
PSYC-850	Psychology of Development .....	3
Selectives .....		0-5

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### Applied Research

#### 6-10 credits

EDUC-816	Instrumentation for Research .....	3
Selectives .....		3-7

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### Professional Education

#### 16-20 credits

EDUC-895	Field Study in Professional Education .....	2-6
Selectives .....		10-14

## Selectives

The student should confer with the program director in choosing selective credits to complete the 36-hour degree requirement. There is considerable flexibility in the program with regard to selectives, and they may be taken as needed to fulfill the individual goals and objectives of the student.

# School Psychology

## Introduction

**Education Specialist Degree** Approved by the National Association of School Psychologists (NASP), this program provides training in both psychology and education. School psychologists use their knowledge, training, and skills to team with educators, parents and other mental health professionals. They work to maximize the learning of students and to develop safe, healthy and enriching school environments.

There are two degree options in the school psychology program. The Education Specialist degree (*Ed.S.*) option follows the completion of the Master of Science in Education degree (*M.S. Ed.*). After completing the *Ed.S.* degree, students are eligible for full certification by the Wisconsin Department of Public Instruction and the corresponding agency in most states. Students can become nationally certified (*NCSP*) by the National Association of School Psychologists by passing an exam.

The *Ed.S.* degree is a 36 to 47 credit degree program. After satisfactorily completing the required course work, practica, a yearlong (*nine month*) internship and a Specialist Thesis, students are awarded the degree.

## Degree Program Admission

To be admitted with full status, the applicant must hold a master's degree in school psychology or a master's degree in a related field. Applicants must have a graduate grade point average of 3.25 or better to be admitted as full-status students. A limited number of applicants may be admitted on probationary status if their overall graduate grade point average is at least a 3.0.

It is recommended that applicants have a master's degree in school psychology. Applicants with master's degrees in related fields will be required to take the additional graduate course work necessary for certification as a school psychologist.

Applicants must submit the Graduate School Application form (*obtainable from the Graduate Office in Bowman Hall*), the Program Application form (*obtainable from the program director*) and their respective documents, along with a portfolio to the selection committee demonstrating their professional competencies related to the field of school psychology.

Students seeking admission to the program should complete and submit their application materials at least 30 days prior to the opening of the term in which they plan to begin their program. After a committee review of the application materials, candidates will be notified of their status prior to the intended enrollment term.

## Primary Evaluation Processes

The primary process used to evaluate student performance is a regular review of the student's course grades, research activities, practicum evaluations, internship evaluations and professional conduct. Program faculty convene once a semester to evaluate each student's progress within the school psychology program. Degree candidacy is awarded to students who are in good standing, have fulfilled all Graduate School requirements for degree candidacy, have fulfilled all school psychology program requirements for degree candidacy and certification, have acquired 30-47 credits of course work in school psychology, have completed a nine-month internship, and have completed a Specialist Thesis. More information regarding the specific requirements is available in the program handbook (*available from the program director*).

## Requirements

Requirements for the *Ed.S.* degree include (a) completion of at least 36 semester hours of graduate credit beyond the master's degree with an overall grade point average of 3.25 or better; a minimum of 18 credits must be in courses open only to graduate students – 700 and 800 level; (b) approval for degree candidacy at the appropriate time; and (c) a course distribution which is outlined here.

The following courses are required for full certification as a school psychologist. The first 30 credits, including those courses indicated in bold type below, are applied toward the master's degree. The remaining credits, practica, internship and Specialist Thesis are applied toward the *Ed.S.* degree in school psychology. Students must attain a grade of "B" or better on all credits applied to the *Ed.S.* degree.

### Core Professional Training

#### 40 Credits

<b>SPSY-753B</b>	Laboratory – School Psychology .....	1
<b>SPSY-743</b>	Advanced Individual Mental Testing .....	3
<b>SPSY-768</b>	Diagnosis and Remediation of Learning Disabilities .....	2
<b>SPSY-768A</b>	Learning Disabilities Diagnosis and Remediation Laboratory .	1
SPSY-710	Psychoeducational Assessment of Young Children .....	2
SPSY-745	Assessment of Personality .....	2
<b>SPSY-778</b>	Psychoeducational Disability .....	3
<b>SCOUN-760</b>	Theories and Techniques of Behavior Modification .....	2
<b>COUN-788</b>	Counseling Process Laboratory .....	3
SPSY-775	School Consultation .....	2
SPSY-701	Seminar – School Psychology Services .....	2
SPSY-781	Field Practicum in Psychoeducational Services I .....	3
SPSY-782	Field Practicum in Psychoeducational Services II .....	3
SCOUN-705	Play Therapy .....	2
<b>SCOUN-790</b>	Supervised Secondary Counseling Practicum .....	3-6
COUN-752	Group Dynamics .....	2
SPSY-784	Clinical Practicum in Psychoeducational Services I .....	2
SPSY-785	Clinical Practicum in Psychoeducational Services II .....	2

### Psychological Foundations

#### 15-19 Credits

PSYC-850	Psychology of Development .....	3
PSYC-730	Advanced Psychology of Learning .....	2
<b>COUN-675</b>	Counseling Theory .....	3
<b>SPSY-753</b>	Psychometric Theory and Application .....	2
<b>EDUC-740</b>	Research Foundations .....	4
<b>SPSY-735</b>	Problems in School Psychology ( <i>Plan B</i> ) or	
<b>SPSY-770</b>	Thesis ( <i>Plan A</i> ) .....	2-6

### Educational Foundations

#### 8 Credits

SPED-630	Inclusion of Students with Exceptional Needs .....	3
SPSY-777	Legal and Ethical Issues for School Counselors and Psychologists .....	2
EDUC-536	Multiculturalism .....	2
EDUC-576	Cross-Cultural Field Experience .....	1

### Education Specialist Degree Requirements

#### 15-18 Credits

SPSY-792	Internship in School Psychology .....	6
SPSY-870	Specialist Thesis .....	3-6

Coursework completed during the master's program is indicated in **bold**.

# Applied Psychology

## Introduction

**Master of Science Degree** This two-year program is designed around a core of psychological theories and principles, with three applied concentration areas: Industrial/Organizational Psychology, Program Evaluation, and Health Psychology. It provides students with the knowledge, experience, skills and abilities to apply the theories and methods of psychology to the identification and solution of a variety of complex individual and organizational problems.

Students will obtain a broad knowledge in psychological foundations; expertise in areas such as group functioning and conflict resolution; individual assessment and coping skills; leadership; assessment and intervention in health promotion; the design, implementation and evaluation of applied programs for individuals and organizations.

Professionals will be role models and agents of change within the organization in which they work. Their role will require a variety of complex interpersonal and self-evaluation skills. Most importantly, they will be teachers and will, therefore, need to model all the complex skills and processes in facilitation and mentoring.

The curriculum is in compliance with the standards adopted by the 1990 National Conference on Applied Master's Training in Psychology and required by the Council on Applied Master's Programs in Psychology. Prerequisites for the program include 15 credits in psychology at the graduate or undergraduate level, including research methods, statistical methods, and psychology of learning. The core curriculum provides a foundation and an organized group of experiences designed to facilitate skills and attitudes necessary for professional conduct. The curriculum in each concentration includes specific learning experiences to teach knowledge, skills and attitudes essential for a qualified professional. A selective group of courses will supplement the core and concentration. With faculty advisement, students will be allowed to select additional experiences appropriate for their unique personal and professional development, based on previous educational and professional experiences and goals.

## Admission

In addition to admission requirements of the Graduate School, students must have completed eight semester credits in research methods, including one course in statistics; and fifteen semester credits of psychology, preferably including one course from each of the following areas: psychology of learning or behavior modification; personality, abnormal, mental health, individual differences; or general psychology.

Applicants must have an overall grade point average of 3.0. Applicants may be admitted on probationary status if their overall grade point average is at least 2.75 but less than 3.0. These exceptions are subject to a strict limit of 10 percent of the students in the program and must be individually negotiated with the recommendation of the program director and the approval of the Graduate School.

The program accepts applications and grants admission year around. However, to be given full consideration application materials must be submitted by February 1 for the summer and fall terms, and October 1 for the spring term. Priority for Graduate Assistantships will be given for those who meet these dates as well. After committee review, notification of acceptance will be made by March 1 for summer and fall terms, and November 1 for the spring term.

## Primary Evaluation Processes

The primary processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following program specific processes: program application; related work experience; degree candidacy; and intent to graduate.

## Requirements

The requirements for this degree include: (a) completion of at least 48 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better and a minimum of 24 credits in courses open only to graduate students—700 and 800 level; (b) successful completion of the 26 credits in the core and 22 credits from one of the concentrations; and (c) approval for degree candidacy at the appropriate time.

### Required Core

#### 26 credits required

PSYC-701	Diversity in the Workplace .....	1
PSYC-702	Ethics in Applied Psychology .....	1
PSYC-707	Applied Social Psychology .....	3
PSYC-708	Psychosocial Intervention .....	3
PSYC-710	Applied Psychology Seminar .....	3
PSYC-790	Applied Research Design in Psychology .....	3
PSYC-791	Research for Decision Making .....	3
PSYC-890	Applied Psychology Internship .....	1-5
PSYC-835	Field Study in Applied Psychology .....	2-4

### Concentrations

#### Industrial/Organizational

**22 credits**

INMG-750	Organizational Development .....	3
PSYC-603	Management of Employee Reward Systems .....	3
PSYC-685	Recruitment and Selection of Human Resources .....	3
PSYC-781	Advanced Industrial Psychology .....	3

*Students will choose 10 credits of selectives with faculty advisement and program director's approval.*

#### Program Evaluation

**22 credits**

INMG-750	Organizational Development <i>or</i> .....	
EDUC-726	Administration .....	2-3
PSYC-750	Principles of Program Evaluation I .....	3
PSYC-751	Principles of Program Evaluation II .....	3
PSYC-771	Advanced Health Psychology <i>or</i> .....	
PSYC-875	Psychoeducational Intervention .....	3-4
PSYC-752	Practicum in Program Evaluation .....	3

*Students will choose 6-7 credits of selectives with faculty advisement and program director's approval.*

#### Health Psychology

**22 credits**

PSYC-771	Advanced Health Psychology .....	4
PSYC-850	Psychology of Development .....	3
PSYC-871	Applied Health Psychology .....	3
PSYC-875	Psychoeducational Intervention .....	3

*Students will choose 9 credits of selectives with faculty advisement and program director's approval.*

# Career and Technical Education

## Introduction

**Master of Science Degree** The graduate program in career and technical education is designed to increase the professional competence of those who plan to serve in a high school or post high school program as a teacher, coordinating teacher, coordinator, supervisor, Career and technical education coordinator or administrator of vocational education. Learning experiences in the immediate professional setting include internship, outreach courses and independent study.

## Admission

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75. Applicants with undergraduate degrees and certification in the various subject areas of vocational-technical education are generally eligible.

Applicants with appropriate subject matter backgrounds, but who do not have the required professional education, will need to complete, for undergraduate credit, at least one appropriate methods course. This should be completed early in the program. Applicants for the emphasis in Career and Technical Education Coordinator (CTEC) must complete, for undergraduate credit, a course in the principles, issues and/or philosophy of vocational-technical education. (*Request additional admission information from the program director for the CTEC concentration.*)

Prior to the awarding of the degree, the student must present evidence of the necessary amount and kind of occupational experience as specified by the appropriate state certifying agency.

A deficiency in these admission requirements does not preclude admission, but may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn a degree.

## Primary Evaluation Processes

The primary processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following program specific processes: application; degree candidacy; and intent to graduate.

## Requirements

The requirements for this degree include (a) completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students – 700 level; (b) approval for degree candidacy at the appropriate time; and (c) a course distribution which is outlined here:

### Preparation in Research

#### 7-11 credits

TECED-739	Introduction to Research in Vocational/Technology Education ...	1
CTE-735	Problems in Vocational Education ( <i>required in CTEC</i> ) or	
CTE-770	Thesis-Vocational Education .....	2-6
EDUC-740	Research Foundations .....	4

### Concentrations

#### Teaching

#### 20-24 credits

CTE-502	Principles of Vocational, Technical and Adult Education .....	2
PSYC-730	Advanced Psychology of Learning .....	2
TECH-532	Futures of Technology .....	2

*Plus, appropriate courses in the teaching/learning process.*

#### Administration

#### 20-24 credits

CTE-502	Principles of Vocational, Technical and Adult Education .....	2
PSYC-730	Advanced Psychology of Learning .....	2
TECH-532	Futures of Technology .....	2

*Plus, appropriate courses in administration.*

#### Career and Technical Education Coordinator

#### 22-23 credits

*This is the certification program for Career and Technical Education Coordinators in Wisconsin; similar positions exist in other states. Degree candidates choose between a research and a non-research option.*

#### Required Core

CTE-560	Cooperative Occupational Education Programs .....	2
CTE-708	Issues in Career and Technical Education .....	2
CTE-710	Coordination and Supervision of Vocational Education .....	2
CTE-XXX	Policy and Issues in Career and Technical Education .....	2
CTE-746	Seminar .....	1-3
EDUC-575	Grant Writing .....	2
EDUC-726	Administration .....	2-3
EDUC-742	Program Evaluation .....	2
PSYC-579	Public Relations .....	2
SPSY-753	Psychometric Theory and Application .....	2

#### Non-Research Option (CTEC only)

CTE-XXX	Interpreting Career and Technical Education Research .....	3
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*Select 11 credits from the following:*

CTE-784	Internship-Local Vocational Education Coordinator or	
CTE-797	Field Experience .....	1-8
EDUC-750	Curriculum Theory and Practice .....	2-3
INMG-616	People Process Culture .....	2
INMG-750	Organizational Development .....	3
PSYC-730	Advanced Psychology of Learning .....	2



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**Marketing Education** **4 credits**

MEBE-701	Issues in Vocational Marketing Education .....	2
MEBE-702	Improving Marketing Education Methods/Materials .....	2

**Special Needs** **20-24 credits**

CTE-502	Principles of Vocational, Technical and Adult Education .....	2
CTE-710	Coordination and Supervision of Vocational Education .....	2
SPEC-630	Inclusion of Students With Exceptional Needs .....	3
PSYC-730	Advanced Psychology of Learning .....	2

Select remaining credits from the following:

TECH-733	Impacts of Technology .....	2
CTE-534	Task Analysis .....	2
CTE-560	Cooperative Occupational Education Programs .....	2
CTE-746	Seminar .....	1-3
CTE-780	Internship – Vocational Education .....	4-8
CTE-792	Administration – Vocational, Technical and Adult Education .....	2
EDUC-536	Multiculturalism: Issues and Perspectives .....	2
SPED-516	Psychology of the Exceptional Child .....	2-3
SPED-518	Introduction to Teaching/Assessment in Special Education .....	2
SPED-526	Practicum in Special Education .....	2
SPED-662	Classroom Management Techniques .....	3
REHAB-723	Procedures of Vocational Evaluation .....	3

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**Preparation for Further Development**

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*The student should confer with the program adviser in choosing the elective credits to complete the 30-hour degree requirements. There is considerable flexibility in the program with regard to electives, and they may be taken as needed to fulfill the individual goals and objectives of the student. Generally, if appropriate to your goal, electives may be chosen from your technical field. Persons preparing to teach will select advanced courses in their subject field. This bulletin lists graduate level technical courses, which are available for graduate credit in certain individual situations. Students are urged to investigate advanced subject matter courses suitable to their particular teaching field; in some teaching areas, it may be desirable to transfer them from another institution. However, prior approval to take any course should be obtained.*

# School Psychology

## Introduction

**Master of Science in Education** The school psychology program provides students with specialized training in both psychology and education. School psychologists use their knowledge, training and skills to team with educators, parents and other mental health professionals. They work to maximize the learning of students and to promote the development of safe, healthy and enriching school environments.

There are two degree options within the school psychology program at UW-Stout. The Master of Science in Education degree (M.S.Ed.) course work occupies the first year of study, and the Education Specialist degree in school psychology (Ed.S.) is completed after the second year of study and a third year of internship. Following successful completion of both degrees, students are eligible for full certification by the Wisconsin Department of Public Instruction and the corresponding agency in most other states. Additionally, after completing both degrees, students are eligible for national certification by the National Association of School Psychologists (NASP).

The M.S.Ed. degree in school psychology is a 30-credit degree program. Students complete course work in psychometrics, counseling, assessment, diagnosis and psychoeducational disabilities. After satisfactorily completing 30 credit hours and a thesis, students are awarded the degree.

## Degree Program Admission

To be admitted with full status to the program, the applicant must hold a bachelor's degree from an accredited college and have an overall undergraduate grade point average of 3.0 or better. A limited number of applicants may be admitted on probationary status if their overall grade point average is at least a 2.75.

Applicants should have an undergraduate degree with a major emphasis in one of the behavioral sciences or a closely related field. As part of the preparation for entry, a minimum of 15 credits in psychology and/or education are recommended. Course work necessary for sufficient preparation includes developmental psychology, abnormal psychology, personality, learning and statistics. An applicant with insufficient background may be required to take specific undergraduate courses in these areas in addition to those required within the graduate program.

The Graduate School Application form (*obtainable from the Graduate Office in Bowman Hall*), the Program Application form (*obtainable from the program director*), and their respective documents must be submitted by each applicant. Applicants must have presented and filed all required admission documents by January 15 prior to enrollment. After committee review, selected applicants will be invited for personal interviews. Following the committee's review, applicants will be notified of their status prior to April 15. If openings occur after this date, the program director and the committee may consider late applications.

Students will be admitted on the basis of academic performance, the recommendation of the Graduate School, and the rankings of the admission's committee. These rankings are based on:

1. Letters of recommendation from employers, faculty, and persons knowledgeable regarding the qualifications of the applicant.
2. The applicant's previous grade point average.
3. An interview in person (*or by telephone when restriction prohibits a personal interview*).
4. An autobiographical statement in which the applicant has outlined areas of interest, intent and professional goals.
5. A spontaneous writing sample completed by the applicant on the interview date.
6. Work or volunteer experience in the helping professions.

## Education Specialist Degree Admission

Admission to the M.S. Ed. program in school psychology does not ensure admission to the Ed.S. program. Admission to the Ed.S. program requires an application to the Graduate School and the Ed. S. program.

Applicants to the Ed.S. program must have maintained at least a 3.25 graduate grade point average, and attained a grade of "B" or better in the following courses: Counseling Process Laboratory, Advanced Individual Mental Testing, Diagnosis and Remediation of Learning Disabilities, Learning Disabilities Laboratory, and Supervised Counseling Practicum. Further, an applicant must be considered a student in good standing, have demonstrated appropriate professional conduct as a graduate student, and have passed a background check conducted by the appropriate state or federal agency.

Practicing professionals who already possess a related master's degree may also wish to seek school psychology certification. Such individuals also must apply for admission to the Ed.S. degree in school psychology program.

## Primary Evaluation Processes

The primary process used to evaluate a student's performance is a regularly scheduled review by the program committee of a student's course grades, research activities, practicum evaluations, and professional ethical/legal conduct. Program faculty convene once a semester to evaluate each student's progress. Degree candidacy is awarded to students who are in good standing, have fulfilled all Graduate School requirements for degree candidacy, and have fulfilled all school psychology program requirements for degree candidacy.



## Requirements

The program outlined here includes all requirements for the M.S.Ed. and Ed.S. degrees in school psychology. Completion of the M.S.Ed. degree will require a minimum of 30 credits, completion of a Plan A or Plan B thesis, and the inclusion of all courses indicated in bold type. Credits earned toward the degree must meet a grade point average of 3.0 or better. A minimum of 15 credits must be at the 700 level. Application for degree candidacy must also be approved at the appropriate time.

All of the following courses are required for full certification as a school psychologist. The first 30 credits can be applied toward the M.S.Ed. degree. The remaining credits, internship, and Specialist Thesis can be applied toward the Ed.S. degree in school psychology after an applicant has been admitted into the Ed.S. program.

## Degree Without Certification

Students who do not intend to work in the schools as a school psychologist but are interested in a related field (*where preparation emphasizing assessment, counseling, consultation, and disabilities is desirable*) may elect to complete the M.S.Ed. degree only.

## Provisional Certificate or Licensure

A provisional certificate or licensure will be awarded to a student who has completed a master's degree and all remaining course work (*except the Internship and Specialist Thesis requirements of the Ed.S. degree*) by the Department of Public Instruction in Wisconsin or a corresponding agency in most states.

### Core Professional Training

#### 40 Credits

<b>SPSY-753B</b>	Laboratory – School Psychology .....	1
<b>SPSY-743</b>	Advanced Individual Mental Testing .....	3
<b>SPSY-768</b>	Diagnosis and Remediation of Learning Disabilities .....	2
<b>SPSY-768A</b>	Learning Disabilities Diagnosis and Remediation Laboratory .	1
SPSY-710	Psychoeducational Assessment of Young Children .....	2
SPSY-745	Assessment of Personality .....	2
<b>SPSY-778</b>	Psychoeducational Disability .....	3
<b>SCOUN-760</b>	Theories and Techniques of Behavior Modification .....	2
<b>COUN-788</b>	Counseling Process Laboratory .....	3
SPSY-775	School Consultation .....	2
SPSY-701	Seminar – School Psychology Services .....	2
SPSY-781	Field Practicum in Psychoeducational Services I .....	3
SPSY-782	Field Practicum in Psychoeducational Services II .....	3
SCOUN-705	Play Therapy .....	2
<b>SCOUN-790</b>	Supervised Secondary Counseling Practicum .....	3-6
COUN-752	Group Dynamics .....	2
SPSY-784	Clinical Practicum in Psychoeducational Services I .....	2
SPSY-785	Clinical Practicum in Psychoeducational Services II .....	2

### Psychological Foundations

#### 15-19 Credits

PSYC-850	Psychology of Development .....	3
PSYC-730	Advanced Psychology of Learning .....	2
<b>COUN-675</b>	Counseling Theory .....	3
<b>SPSY-753</b>	Psychometric Theory and Application .....	2
<b>EDUC-740</b>	Research Foundations .....	4
<b>SPSY-735</b>	Problems in School Psychology ( <i>Plan B</i> ) or	
<b>SPSY-770</b>	Thesis ( <i>Plan A</i> ) .....	2-6

### Educational Foundations

#### 8 Credits

SPED-630	Inclusion of Students with Exceptional Needs .....	3
SPSY-777	Legal and Ethical Issues for School Counselors and Psychologists .....	2
EDUC-536	Multiculturalism .....	2
EDUC-576	Cross-Cultural Field Experience .....	1

### Education Specialist Degree Requirements

#### 15-18 Credits

SPSY-792	Internship in School Psychology .....	6
SPSY-870	Specialist Thesis .....	3-6

Course work completed during the master's program is indicated in **bold**.

# Education

## Introduction

**Master of Science Degree** The purpose of the education program is to prepare individuals to work as professional teachers, or to enhance the skills they already have. The focus of the course work in the program is on the learner, teacher behavior, teaching-learning processes, research and evaluation. The program is open to professionals who provide instruction in any discipline or work with learners at any age level. The open concentration provides flexibility for students to choose course work which promotes their professional development goals.

A unique program is available for individuals who are interested in obtaining their teacher certification in Special Education/Cognitive Disabilities, grades K-12, while pursuing the education degree. Students do not need an undergraduate teaching degree to qualify for this program. In addition to the required course work for the education degree, an individualized plan is developed to meet Department of Public Instruction standards. The number of credits to qualify for certification will vary, depending on each student's undergraduate and graduate experiences. If students do not have a teaching undergraduate degree, they must complete all certification and degree requirements before being recommended for certification. At least 12 special education credits plus student teaching must be completed at UW-Stout to be recommended for certification.

## Admission

To be admitted with full status to this program, the applicant must (1) hold a bachelor's degree from an accredited institution; (2) have an overall grade point average of at least 2.75, or an average of at least 2.90 in the last one-half of the undergraduate work. Applicants with an overall grade point average ranging from 2.5 to 2.75 who are seeking teacher certification may be considered for probationary admission. Enrollment is open throughout the year.

Applicants must provide both the Graduate School application form and the M.S. in Education program application form, including documents identified on the forms. Both forms are available online at <http://www.uwstout.edu/programs/mse/>.

## Primary Evaluation Processes

The primary processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following program specific processes: program application; related work experience; degree candidacy; and intent to graduate.

## Requirements

The requirements for this degree include: (a) completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students—700 level; (b) approval for degree candidacy at the appropriate time; (c) satisfactory completion of thesis or problems in education; and (d) a course distribution as outlined here:

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### Professional Core

EDUC-726	Administration.....	3
EDUC-782	Instructional Analysis.....	4
EDUC-790	Professional Portfolio Development.....	2
PSYC-730	Advanced Psychology of Learning or	
EDUC-500	Educational Psychology or	
EDUC-603	Educational Psychology of the Adult Learner .....	2-3

Take one of the following, based on certification area:

EDUC-750	Curriculum Theory and Practice.....	2-3
SPED-524	Curriculum and Instruction Career and Transition Education.....	3
SPED-510	Methods, Materials and Curriculum for the Exceptional Child.....	3
FCSE-708	Curriculum Studies in Family and Consumer Sciences Education .....	2

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### Research

EDUC-729	Introduction to Educational Research .....	1
EDUC-740	Research Foundations or	
EDUC-742	Program Evaluation or	
EDUC-741	Grant Proposal Development .....	3-4
EDUC-735	Problems in Education or	
EDUC-770	Thesis .....	2-6

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### Concentrations

**4-11 credits required**

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#### Professional Development Concentration

Select courses that are compatible with the Professional Development Plan approved by your program director. On-campus students complete professional core and foundation classes on campus. Online students progress through the entire program with a cohort group in the sequence and time established.

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#### Certification Concentration

Certifications are currently available in Special Education, Early Childhood Education, and Family and Consumer Science. Additional undergraduate credits are required in some certification options. Students must meet with the program director to determine requirements for admission and certification.

# Family Studies and Human Development

## Introduction

**Master of Science Degree** The Family Studies and Human Development program is intended for individuals with a strong interest in the study of family and human development. The focus of the program is the development of the individual across the lifespan with an emphasis on family system processes and relationships. The program offers flexibility in the elective courses so students in consultation with the program director can build a plan that is compatible with their own interests and career goals. The department offers coursework and faculty expertise in gerontology, work/family issues, family policy, family resource management, child and adolescent development, family stress and abuse, and program planning.

The program provides students the opportunity to learn with a cohort of students. Cohort groups will learn and study together as they complete the six required courses. Required courses will combine on-campus and e-learning methodologies. Content and delivery of coursework is related to the following objectives:

- ▶ Provide career preparation by challenging and assisting students in developing innovation leadership skills in family studies and human development related careers.
- ▶ Increase the graduate student's capacity for independent action in scholarly and professional pursuits.
- ▶ Develop an in-depth knowledge built on undergraduate work and experience.
- ▶ Motivate students to survey family studies and human development related literature and apply this knowledge to practical, theoretical and academic problems.
- ▶ Provide students with skills in conducting independent and creative research.

## Primary Evaluation Processes

The primary processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following program specific processes: program application; student advisement; residency; program plan; degree candidacy; and intent to graduate.

## Admission

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75. Applicants with an overall grade point average of 2.5 to 2.75 may be considered for probationary admission. This bachelor's degree will generally have been earned in the major areas of home economics.

## Requirements

The requirements for this degree include completion of at least 30 hours of graduate credit with an overall grade point average of 3.0 or better. A minimum of 15 credits must be in courses open only to graduate students—700 or 800 level. Students must be approved for degree candidacy at the appropriate time.

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### Professional Core

#### **17-21 credits required**

HDFS-704	Child/Family Services .....	2
HDFS-715	Theories of Family Processes .....	2
HDFS-728	Family Life Issues .....	3
HDFS-7XX	Theory Based Research Methods .....	3
HDFS-740	Special Problems in Family Life Education .....	2
HDFS-742	Lifespan Family and Human Services Seminar .....	3
HDFS-735	Problems in Family Studies <i>or</i>	
HDFS-770	Thesis in Family Studies and Human Development .....	2-6

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### Selectives

#### **9-13 credits required**

*The student will choose the appropriate number of selective courses from the approved lists with faculty advisement.*

# Food and Nutritional Sciences

## Introduction

**Master of Science Degree** The graduate program in food and nutritional sciences combines a strong content knowledge base with expertise to conduct applied research. The curriculum is partitioned into three concentrations that augment the research and class core. The three concentrations are food science and technology; human nutritional science; and food packaging.

The general goals of the food and nutritional sciences program are to develop students that:

- Have a comprehensive knowledge base regarding food science and nutrition topics and are able to apply this knowledge through the appropriate use of advanced communication technologies and strategies;
- Excel in the design, implementation, evaluation, and dissemination of food and nutrition research;
- Demonstrate creative, critical, and strategic thinking skills that can be applied to food and nutrition issues;
- Formulate a philosophical and ethical approach to their work;
- Competently compete for, attain, and succeed in positions in food science, food safety, food packaging, clinical and public health nutrition, nutrition and education;
- May successfully sit for the dietetic registration examination upon completion of the UW-Stout dietetic internship.

## Admission

Admission requirements include a bachelors degree, minimum grade point average of 3.0, and if English is a second language, a TOEFL score of 500. The GRE is not required. Course work requirements include one semester each of foods/food science; general microbiology; human anatomy and physiology; general chemistry; organic chemistry with laboratory; nutrition; advanced nutrition; advanced foods or experimental foods; and basic statistics.

Applicants with a grade point average ranging from 2.5 to 3.0 may be admitted on a probational basis. Admission may be on a provisional basis for applicants without the necessary course work. Upon satisfactory completion of the deficient course work, a provisionally admitted student will be fully admitted to the Graduate School.

## Primary Evaluation Processes

The primary processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following program specific processes: program application; degree candidacy; research topic approval; and intent to graduate.

## Requirements

The requirements for this degree include: (a) completion of at least 40 semester credits with an overall grade point average of 3.0 or better, and a minimum of 20 of those credits in courses open only to graduate students—700 and 800 level; (b) approval of degree candidacy at the appropriate time; and (c) completion of the research and professional requirements.

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### Research Preparation

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#### 11 credits minimum

FN-770	Thesis in Food Science and Nutrition or	
FN-735	Problems in Food Science and Nutrition .....	2-6
STAT-520	Statistical Methods .....	3
PSYC-790	Applied Research Design .....	3
XXX-XXX	Approved research course(s) .....	3

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### Professional Preparation

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#### 20 credits minimum

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#### Core Requirements

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**4 credits**

FN-701	Trends in Foods or Nutrition .....	1-2
FN-720	Workshop in Foods and/or .....	
FN-721	Workshop in Nutrition .....	2

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### Concentrations

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#### 16 credits minimum

Choose from:

- ▶ **Food Science and Technology**
- ▶ **Human Nutritional Science**
- ▶ **Food Packaging**

Concentration courses may be selected from an approved list in consultation with the program director to meet individual needs of the student. See program director for concentration course selectives.

**Note:** FN-865 Supervised Practice in Medical Nutrition Management is the dietetic internship. Eight credits may be applied toward professional selective credits. Special admission required.

# Information and Communication Technologies

## Introduction

**Master of Science Degree** The graduate program in Information and Communication Technologies is designed to meet the needs of individuals working in related occupations that presently have a baccalaureate degree in a related field. This graduate program is intended for individuals interested in a selected area of information and communication technologies. Information and communication technologies (ICTs) are technologies that are used to produce, store, process, disseminate and exchange information. The student will complete 15 credits in a professional core and a minimum of 15 credits in one of the four emphasis areas.

The degree will be delivered through a distance education format, primarily online with minimal on-campus requirements.

## Admission

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college, have an overall grade point average of at least 2.75 and have the equivalent of two years of appropriate experience.

## Requirements

The curriculum requires 30 credits including 15 credits in the core curriculum and a minimum of 15 credits in an emphasis area. Fifteen credits must be graduate only (700 level). There is a required research component that students satisfy with course-embedded projects that lead to completion of a portfolio. These projects, as well as additional research, completed in the chosen emphasis area, will be included in the student's portfolio. The portfolio will allow the learner to demonstrate growth in both the broader core curriculum of the program as well the specific competencies of their emphasis area.

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### Core Curriculum

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#### 15 credits

ICT-701	Information and Communication Technologies in Organizations.....	3
ICT-702	Seminar in Information and Communication Technologies .....	3
INMGT-700	Organizational Research Methods .....	3
MEDIA-710	Learning Technologies .....	3
ICT-780	Information and Communication Portfolio .....	1-3

### Emphasis Area

### Minimum of 15 credits

*Students will select an emphasis area from one of the following: information technology management, learning technology, technology coordinator, or visual communications technology. The courses within the emphasis area will be selected to meet the competencies within the emphasis area and need to be approved by the program director.*

# Manufacturing Engineering

## Introduction

**Master of Science Degree** The graduate program in manufacturing engineering has been designed in response to regional needs for a graduate program to provide educational incentives for recruitment and retention of engineers. The program will accommodate the work requirements of these full-time professionals, being presented entirely by distance delivery means to the student's location. Workshops offered through UW-Stout's Northwest Wisconsin Manufacturing Outreach Center (NWMOC) are incorporated into the degree program.

Objectives of the program are that graduates will know how:

1. To apply mathematical models to the analysis of practical engineering problems.
2. To apply appropriate production operations management principles to the design and operation of manufacturing processes and systems.
3. To develop expertise in the areas of project management, automation and control, system design and integration, or other advanced manufacturing engineering topics.
4. To synthesize the knowledge gained in the first three objectives in solution of practical engineering projects.

## Entrance Requirements

Admission requirements include a bachelor's degree in engineering, a minimum grade point average of 3.0, and, if English is a second language, a TOEFL score of 500 or higher. The GRE is not required. Applicants with undergraduate degrees in fields closely related to engineering and with appropriate engineering experience in manufacturing or with a grade point average below 3.0 may be admitted at the discretion of the program director.

## Progress Toward Degree

Students will enroll in a sequence of courses that are offered via distance delivery and face-to-face instruction. Benchmarks include satisfactory completion of coursework with a grade of "B" or better, field research project approval and completion of a field research project.

## Requirements

The program requires 30 hours of graduate credit, 15 of which must be graduate-only (700 level), with an overall grade point average of 3.0 or better. Fifteen credits are included in the core curriculum, three credits are taken from a list of selectives, and twelve credits are to be taken from two of the following depth areas:

- Manufacturing Competitiveness
- Engineering Materials and Processes
- Mechanical Design

## Core Curriculum

### 15 Credits

INMGT-610	Six Sigma Quality Improvement Methods.....	3
INMGT-625	Planned Experimentation for Quality Improvement.....	3
INMGT-700	Organizational Research Methods.....	3
MFGE-707	Field Problem Formulation .....	1
MFGE-735	Problems in Manufacturing Engineering (Plan B).....	3
RC-581	Occupational Safety/Loss Control .....	2

## Selectives

Select 3 credits from the following:

BUACT-730	Financial, Managerial, and Cost Analysis.....	3
INMGT-622	Quality Engineering.....	3
INMGT-765	Program Management .....	3
INMGT-705	Enterprise Resource Planning.....	3
RC-587	Human Factors Engineering.....	3
SUST-515	Sustainable Engineering.....	3
SUST-730	Sustainable Futures.....	3

## Depth Area Selectives

Students are required to take 12 credits from at least two depth areas:

### Manufacturing Competitiveness

INMGT-640	Lean Enterprise .....	3
INMGT-745	Advanced Manufacturing Simulation .....	3
MFGE-640	Manufacturing System Design and Simulation.....	3
MFGE-665	Reliability Engineering .....	3

### Engineering Materials and Processes

MFGE-753	Polymer Engineering .....	3
MFGE-771	Emerging Manufacturing Materials .....	3
MFGE-7XX	Variable Topics in Manufacturing Engineering.....	3

### Mechanical Design

MECH-723	Finite Element Methods and Projects.....	3
MECH-726	Advanced Mechanics of Materials.....	3
MECH-729	Product Development and Design .....	3

**Transfer Credit:** With program director approval and subject to Graduate School policies, up to 1/3 of the total credits may be transfer credits from an institution accredited to offer graduate degrees.



# Marriage and Family Therapy

## Introduction

**Master of Science Degree** Students develop specific competence in the following areas of marriage and family therapy (MFT) lifespan human development, family dynamics, research, MFT ethics and legalities; systemic and interactional theories; and cultural competence related to the practice of individual, couple, family and group therapy. It includes direct experience conducting admission to treatment, clinical assessment and diagnosis, treatment planning, case management, and therapeutic intervention.

This bulletin provides only a brief overview of the program. A more detailed description can be found online at [www.uwstout.edu/programs/msmft](http://www.uwstout.edu/programs/msmft).

This program prepares people for work in clinical settings such as mental health agencies, in-home therapy, day treatment, behavioral health (hospitals), schools and/or private practice. The program has a balance of classroom and field experience. Field experience occurs in clinic settings with live supervision. This is one of the longest running programs in the nation to be fully accredited by the Committee on Accreditation for Marriage and Family Therapy Education (COAMFTE). It meets state educational requirements for licensing (*especially Wisconsin and Minnesota*) and prepares students for the AMFTRB (*national*) MFT exam required for license.

## Admission

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75. Applicants who have less than a 2.75 overall grade point average, but have relevant work or volunteer experience since receiving the bachelor's degree and who are otherwise judged qualified as indicated below, may qualify for admission with probationary status. This would require that they complete graduate courses within the first term of enrollment with a minimum grade point average of 3.0 in order to continue in the program.

It is recommended that the applicant have an undergraduate degree with major emphasis in one of the behavioral sciences or a closely related field. Applicants are advised to complete the admissions process no later than the program's annual priority deadline (*usually mid to late winter*) as published on the Graduate School website at [www.uwstout.edu/grad](http://www.uwstout.edu/grad). Later applicants may be considered on a space available basis. Both a Graduate School application form (obtainable from the Graduate School Office or website) and program application forms (*obtainable from the MFT program office or website at [www.uwstout.edu/programs/msmft](http://www.uwstout.edu/programs/msmft)*) are required. All required Graduate School admission documents (*application, fee, transcripts, and the like*) must be in the Graduate School office, and program admission documents must be in the MFT program office, prior to the priority deadline.

When the number of applicants exceeds the number that can be accommodated, students will be admitted on the basis of academic performance and other factors appropriate for consideration including:

1. Professional or volunteer work experience in a helping profession, i.e., counseling, social work, psychology, agency work, residential care, domestic violence, drug counseling, in-home therapy, clergy and education.

2. Letters of recommendation from educators, employers and / or consumers of services provided by the applicant. (*These forms available from the MFT program office or program website.*)
3. Ratings of the individual as determined by an on-campus screening interview, followed by a group process evaluation. Admitting a diverse class of students is a priority.

Once accepted into the program, students will be required to complete a low cost criminal background check that will not affect their admission status, but could limit the availability of practicum placements.

## Primary Evaluation Processes

The primary processes used to evaluate progress in the program include assessment of academic course performance as well as performance in the clinical practicum. All evaluations are based on the clinical competencies (*specified in the Introduction*) expected of an MFT in training. Grades are used to reflect a student's level of competence.

## Requirements

The requirements for this degree include: (a) completion of the 56-credit curriculum (*specified below*) or demonstrated competence in the 56-credit curriculum with completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 28 credits must be in courses open only to graduate students-700 level; and (b) approval for degree candidacy at the appropriate time.

## Professional Requirements

### 54 Credits

COUN-723	Psychopathology: Assessment and Treatment Planning .....	3
COUN-761	Counseling Children and Adolescents .....	3
HDFS-715	Theories of Family Processes .....	2
HDFS-742	Lifespan Family and Human Development .....	3
MFT-740	Cultural Competence in Family Therapy .....	3
MFT-745	Treating Drug Abuse, Intimate Violence, and Self Harm .....	3
MFT-765	Research in Psychotherapy .....	3
MFT-752	Couples and Sex Therapy .....	3
MFT-744	Psychometric Aids to Couples and Family Therapy.....	2
MFT-750	Foundations of Couples and Family Therapy .....	3
MFT-751	Contemporary Couples and Family Therapy .....	3
MFT-755	Professional Issues in Couples and Family Therapy.....	3
MFT-793	Couples and Family Therapy Practicum I .....	8
MFT-794	Couples and Family Therapy Practicum II .....	8
MFT-795	Couples and Family Therapy Practicum .....	3
XXX-XXX	Electives .....	1



# Mental Health Counseling

## Introduction

**Master of Science Degree** The Mental Health Counseling program provides students with the assessment, diagnosis, prevention, and treatment skills necessary for helping with behavioral and emotional difficulties of clients from a diversity of backgrounds. Training in mental health counseling services includes the provision of principles and theories of counseling and psychotherapy, group dynamics, family systems theories, human and career development, and psychological assessment, as well as understanding and remediation of the causes of mental illness and dysfunctional behavior. Mental health counselors work with individuals, groups, couples, and families for the purpose of treating psychopathological conditions and optimizing human growth and development.

The Mental Health Counseling program is designed to prepare students for the National Counselor Examination (NCE) and meet the state of Wisconsin's requirements to become a Licensed Professional Counselor (LPC). It also allows the opportunity for students to develop specialized areas of training through various concentrations. These concentrations include: Alcohol and Drug Abuse Counseling; Career Counseling; Child and Adolescent Counseling; Eating Disorders; and Gerontological Counseling.

## Admission

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75. Applicants may be admitted on probationary status if their overall grade point average is at least 2.5, but less than 2.75. Both the Graduate School Application form (obtainable from the Graduate School office) and a Program Application form (obtainable from the program director) must be submitted by each applicant and include the documents identified on each form. Applicants must have presented and filed all required admissions documents by February 1 for summer and fall terms, and October 1 for the spring term. After committee review and a group interview, notification of acceptance will be made by mid-March for summer and fall terms, and mid-November for the spring term. Students will be evaluated on the basis of academic performance, admissibility to the Graduate School, writing ability, level of experience in the human services field, applicability of educational experiences, letters of recommendation, the group interview process, and subsequent rankings of a screening committee.

## Requirements

The degree requires a minimum of 60 credit hours. Transfer credits may not exceed 20. A passing grade is required on the comprehensive examination taken near the end of the program. A master's research paper (two credit Problems or six credit Thesis) can be completed in lieu of the comprehensive examination. Students must be approved for degree candidacy at the appropriate time and follow an approved program plan, developed in conjunction with the program director. A minimum 3.0 grade point average must be maintained on all courses in the plan.

## Core Requirements

**60 credits**

COUN-788	Counseling Process Laboratory .....	3
COUN-750	Counseling Theory .....	3
COUN-752	Group Dynamics .....	3
COUN-715	Orientation to Mental Health Counseling .....	3
COUN-725	Social and Cultural Issues in Counseling .....	3
COUN-723	Psychopathology: Assessment and Treatment Planning.....	3
COUN-721	Alcohol and Drug Abuse Treatment Programs .....	3
COUN-754	Assessment and Clinical Interviewing in Counseling.....	1
COUN-789	Cognitive- Behavioral Therapy .....	3
COUN-793	Mental Health Counseling Practicum .....	3
COUN-794	Mental Health Counseling Internship .....	6
HDFS-742	Lifespan Family and Human Development .....	3
MFT-751	Contemporary Couples and Family Therapy .....	3
REHAB-715	Research in Rehabilitation and Counseling .....	3
SCOUN-733	Lifespan Career Development .....	3
SPSY-753	Psychometric Theory and Application .....	2
Electives	(courses may be selected from a concentration or with the approval of the program director).....	12

## Concentrations

Students select one of the following concentrations:

### Alcohol and Other Drug Abuse Counseling **10 credits**

COUN-722	Advanced Topics in Compulsive Behavior Disorders .....	3
COUN-720	Psychopharmacology .....	2
MFT-745	Treating Drug Abuse, Intimate Violence and Self Harm .....	3
REHAB-533	Adolescent Substance Use and Abuse .....	2

### Career Counseling **7 credits**

REHAB-683	Vocational Counseling Issues .....	2
CTE-502	Principles of Career and Technical Education .....	2
REHAB-717	Occupational Analysis and Job Placement .....	3

### Child and Adolescent Counseling **10 credits**

COUN-761	Counseling Children and Adolescents .....	3
SCOUN-647	Emotional and Behavioral Problems of Children and Adolescents .....	3
SCOUN-705	Play Therapy .....	2

Select one of the following courses:

COUN-647	Assessment and Treatment of Eating Disorders or	
REHAB-533	Adolescent Substance Use and Abuse .....	2

### Eating Disorders **9 credits**

COUN-647	Assessment and Treatment of Eating Disorders.....	2
COUN-722	Advanced Topics in Compulsive Behavior Disorders .....	3
COUN-745	Treating Personality Disorders .....	1
MFT-745	Treating Drug Abuse, Intimate Violence and Self Harm .....	3

### Gerontological Counseling **10 credits**

HDFS-540	Human Development Late Adulthood.....	3
COUN-694	Counseling Older Persons .....	3
HDFS-642	Geriatric Functional Assessment .....	4

# Risk Control

**Master of Science Degree** To remain competitive in today's global economy, organizations need to effectively protect their human, financial, legal, property and natural resources. UW-Stout strongly embraces this resource protection perspective with a M.S. degree in Risk Control that prepares individuals to serve as consultants in the areas of employee safety, facility and environmental protection. This masters degree program is nationally recognized by major corporations for developing a broad range of technical as well as managerial skills that align with the demands of a highly dynamic profession.

The Risk Control program is a comprehensive course of study is designed to meet both the personal and professional needs of the student by emphasizing a technical base in employee, legal, environmental and property protection; and a solid management perspective in those areas

The program stresses the means by which loss prevention as well as loss reduction-based activities are integrated into an organization's day-to-day practices. Individuals from business, industry, education and government-oriented backgrounds seek this program to assist with professional growth and/or a possible career change. Students in the program continuously integrate theory with realistic, practical problem solving experiences with local industries and thus hone their ability to work in a team-oriented professional setting. The M.S. in Risk Control program maintains a competency-based focus which stems from close collaboration with successful business leaders that work in the risk control/safety profession.

## Admission

To be admitted to this program with full status, the applicant must hold a bachelor's degree from an accredited college with an overall grade point average of at least 3.0. Applicants with an overall grade point average ranging from 2.5 to 3.0 may be considered for probationary admission. In addition, the applicant must have appropriate academic coursework in the areas of general safety, chemistry and organizational leadership. A deficiency in these prior coursework requirements does not preclude admission, but would still require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree. Professional, industrial/trade or educational experience is a definite plus for those who enroll in the program. An individual program of study will be designed to accommodate the requirements of the profession and the needs of the student. Final student selection and admission to the program will be accomplished by the program director and the faculty. The application deadline for fall semester admissions is February 1 while spring applications are due by October 1. Late applications may be considered after these dates only if openings exist for the coming term.

## Primary Evaluation Processes

The primary processes used to evaluate each applicant include his/her professional goals, related work experience, prior degree and the

grade point average of such academic work. Upon acceptance into the program, the faculty provides timely performance feedback on the students' ability to master the various technical as well as managerial concepts that are promoted in each of the core program courses.

## Requirements

The requirements for the M.S. Risk Control degree include (a) completion of at least 39 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better, (b) completing a minimum of 20 credits at the 700 level, and (c) and being approved for degree candidacy in relation to the following program-specific courses:

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### Management/Applied Research

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#### 14-17 credits required

RC-640	Environmental Leadership and Sustainability Management .....	3
RC-735	Field Problem in Risk Control .....	2-4
RC-781	Risk Management Applications .....	3
RC-782	Loss Control Systems.....	3

#### Select One:

INMGT-700	Organizational Research Methods.....	3
EDUC-740	Research Foundations.....	4

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### Risk Control/Safety/Property Protection

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#### 17 credits required

RC-583	Occupational Safety, Health and Environmental Standards .....	3
RC-586	Fire Protection .....	2
RC-587	Human Factors Engineering/Ergonomics .....	3
RC-589	Fleet Risk Control Management.....	3
RC-595	Emergency Preparedness and Response .....	3
RC-725	Process Hazard Management.....	3

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### Industrial Hygiene/Occupational Health

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#### 8 credits required

BIO-720	Toxicological Effects in Humans.....	3
CHEM-710	Industrial Hygiene Instrumentation .....	2
CHEM-742	Industrial Hygiene .....	3

# School Counseling

## Introduction

**Master of Science Degree** The program in school counseling provides a basic preparation in school counseling that leads to certification by the State of Wisconsin for employment in the public schools.

Students who seek certification from the Wisconsin Department of Public Instruction must meet both elementary and secondary requirements for certification as a school counselor on a PK-12 basis.

Learning experiences in the immediate professional setting include supervised counseling practicum and internship.

## Admission

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75. Applicants may be admitted on probationary status if their overall grade point average is at least 2.5, but less than 2.75. These exceptions are subject to a strict limit of 10 percent of the students in the program and must be individually negotiated with the recommendation of the program director and the approval of the Graduate School.

Both the Graduate School Application form (*obtainable from the Graduate School*) and a Program Application form (*obtainable from the program director*) must be submitted by each applicant, including the documents identified on these two forms. Applicants must have presented and filed all required Graduate School documents to the Graduate School office by February 1 for summer and fall terms, and October 1 for the spring term. After committee review and a personal interview for selected applicants, notification of acceptance will be made by May 1 for summer and fall terms, and December 1 for the spring term. The process and deadlines for selecting applicants will be strictly followed in each case.

Students will be admitted on the basis of academic performance, admissibility to the Graduate School, recommendations and rankings of a screening committee. These rankings are based on: 1. Experience in a helping profession, i.e., counseling, education, social work, psychology and volunteer activities; 2. Letters of recommendation from employers, instructors and consumers of services provided by the applicant; 3. An autobiographical statement in which the applicant has outlined assets and liabilities as a potential counselor trainee; and 4. Academic performance and potential as demonstrated by performance in undergraduate coursework, and any additional graduate coursework. A personal interview with the program director and faculty is also required. The interview is scheduled with selected applicants following review of application materials.

## Requirements

The degree requires a minimum of 50 credit hours. Transfer credits may not exceed 12. An overall graduate grade point average of 3.0 or better is required, and a minimum grade of 2.75 is required for all core requirements. Students must also be approved for degree candidacy at the appropriate time and follow the approved program plan outlined here:

## Core Requirements

COUN-750	Counseling Theory.....	3
COUN-752	Group Dynamics.....	3
COUN-788	Counseling Process Laboratory.....	3
EDUC-740	Research Foundations .....	4
HDFS-742	Lifespan Family and Human Development .....	2-3
SCOUN-735	Problems in Counseling and Psychological Services (Plan B) or	
SCOUN-770	Thesis (Plan A).....	2-6
SCOUN-647	Emotional/Behavioral Problems of Children and Adolescents .....	3
SCOUN-733	Lifespan Career Development.....	3
SCOUN-765	Professional Orientation to School Counseling.....	3
SCOUN-782	PK-12 Developmental Guidance Curriculum .....	3
SCOUN-788	School Counseling Practicum.....	2-3
SCOUN-789	Elementary School Counseling Internship .....	3
SCOUN-790	Secondary School Counseling Internship.....	3
SCOUN-793	School Counseling Internship Seminar .....	2
SPSY-753	Psychometric Theory and Application.....	2
SPSY-753A	School Counseling Laboratory .....	1
SPSY-775	School Consultation .....	2
SPSY-777	Legal and Ethical Issues .....	2

## Selectives (2 credits; self-designed concentrations are encouraged)

SCOUN-705	Play Therapy .....	2
ANTH-620	Anthropological Study of Family Systems.....	3
PSYC-666	Alcoholism and Family Systems Intervention .....	2
SCOUN-690	Behavioral Interventions in the Schools.....	2
CTE-502	Principles of Career and Technical Education.....	2
EDUC-XXX	Approved seminar/current issues course .....	1-3
SPED-524	Curriculum and Instruction: Career and Transition Education .....	3
EDUC-615	Classroom Management .....	3
EDUC-750	Curriculum Theory and Practice.....	3
FCSE-708	Curriculum Studies .....	2
SCOUN-792	Postsecondary Practicum.....	2

**Note:** Depending on undergraduate degree major, some students are required to complete additional course work to meet minimum competency for certification. Minimum competency courses are Psychology of Learning; Inclusion; Multiculturalism; Preparation for Research; and Organization, Administration, Operation of Schools.

## Full Time or Part Time Study

Extended field placement (*internship*) required in this program consists of 600 hours in the school. Part-time study while holding a full-time job is very difficult unless the employment provides considerable flexibility. The internship may not be completed in the summer session because the time available is not extensive enough and regular school placements are not available. Therefore, full-time study for at least one semester is recommended. A substantial portion of the course work may be completed part time by attending summer sessions, attending during the regular semesters for late afternoon and evening classes, or enrolling in continuing education off-campus courses. However, a commitment for at least one semester full time, or two semesters half time, is required at the point where the student is ready for internship placement.

# Technical and Professional Communication

## Introduction

**Master of Science Degree** The graduate program in Technical and Professional Communication (MSTPC) is a 30-credit, online degree program designed for working professionals. The program attracts students who wish to work as technical communicators in industry, manage document production groups, or those intending to professionalize their communication skills to be more competitive in the job market.

**Flexibility.** This program can be completed around your schedule, whether you need to enroll part-time or full-time.

**Quality Instruction.** Program faculty have experience teaching in online environments, and the program is evaluated yearly to help ensure that students receive quality instruction.

**Variety.** The program offers a wide variety of courses including rhetorical theory, usability and user-centered design, communication strategies for emerging media, visual rhetoric, project management, and international technical communication.

## Admission

To apply for the program, candidates need to apply to the UW-Stout Graduate School. To complete this application, e-mail a Statement of Goals to the program director (*see website*). This three-page statement should address the candidate's academic history, employment history and professional goals. The Statement of Goals will be used during the admission selection process and, if admitted, during the student's academic advising process.

To gain full admission to the program, the program selection committee requires that the applicant must hold a baccalaureate degree with an overall GPA of at least 2.75 GPA. The committee favors those students with academic and workplace experience writing and designing documents and those with keen interests in professionalizing their communication practices and project management skills.

## Requirements

The requirements for this degree include (a) minimum of at least 30 semester hours of graduate credit with an overall grade point average of 3.0 or better, with a minimum of 15 credits at 700-level or above; (b) approval for degree candidacy at the appropriate time; (c) program requirements must be completed in seven years or less; and (d) course distribution as follows:

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### Core Courses

#### 12 credits

ENGL-615	Technical Writing .....	3
ENGL-700	Theory and Research in Technical Communication .....	3
ENGL-720	Rhetorical Theory .....	3
ENGL-740	Visual Rhetoric for Technical and Professional Communicators.....	3

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### Advanced Study

#### 15 credits

Choose 15 credits from the following:

ENGL-512	International Technical Communication .....	3
ENGL-625	Usability Design and Testing .....	3
ENGL-635	Writing Technical Manuals .....	3
ENGL-637	Technical Writing Practicum .....	1-3
ENGL-730	User-Centered Research for Technical Communicators .....	3
ENGL-745	Communication Strategies for Emerging Media .....	3
ENGL-750	Special Topics in Technical and Professional Communication ....	3
INMG-565	Project Management .....	3
INMG-675	Advanced Project Management .....	3

*\*Up to 9 credits of approved graduate transfer coursework may be applied\**

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### Independent Research

#### 3-6 credits

ENGL-735	Field Project in Technical and Professional Communication or	
ENGL-770	Technical and Professional Communication Thesis .....	3-6

# Technology Education

## Introduction

**Master of Science Degree** The M.S. in Technology Education program is offered online in response to the increased interest in alternative forms of delivery and the changing needs and responsibilities of technology education teachers locally and nationally. The program provides licensed technology teachers an opportunity to make informed decisions regarding the profession through an emphasis on current curricular practices, activities and research based work.

The program's focus on the design of curriculum, instruction and assessment is grounded in professional literature. However, each course is designed to allow teachers to bring what they have learned directly back to their classrooms to enrich their instruction. The framework of the program was informed by the National Board for Professional Teaching Standards, therefore graduates are also able to apply many of the tasks completed in their coursework to achieve National Board Certification.

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## Curriculum

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**30 credits**

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### Foundations in Philosophy or Psychology **4 credits**

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PSYC-730	Advanced Psychology of Learning.....	2
TECED-704	History/Philosophy of Tech Ed .....	2

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### Curriculum and Program Development **4 credits**

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TECED-638	Course Construction .....	2
TECED-710	Curricular Innovations in Tech Ed .....	2

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### Facilitation and Management of Learning **2 credits**

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TECED-603	Activities in Tech/Voc Education .....	2
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### Evaluation **12 credits**

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EDUC-742	Program Evaluation .....	3
EDUC-744	Seminar or .....	
TECED-XXX	(as approved by program director) .....	3
TECED-708	Issues in Technology Education .....	2
EDUC-782	Instructional Analysis .....	4

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### Research **7-11 credits**

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TECED-739	Intro to Research in Voc/Tech Ed .....	1
EDUC-740	Research Foundations .....	4

Select at least one of the following:

TECED-735	Problems in Industrial/Tech Ed .....	2
TECED-770	Thesis – Industrial/Tech Ed .....	6

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### Electives **0-1 credits**

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# Technology Management

## Introduction

**Master of Science Degree** This program provides educational experiences that prepare graduates for management and staff positions in business and industry. The program will prepare students for advanced leadership positions that involve planning, organizing, and implementing technological systems in today's global business and technical environments. Students select a technical specialty area depending on their professional goals, educational background and available faculty expertise. Technical specialties such as Production Operations, Quality Management, Graphic Communications, Packaging, or Telecommunication Systems, Quality Management, Industrial Engineering Technology, Production Operations, Information Technology, Packaging, and Supply Chain Management may be developed. Learning experiences in the immediate professional setting include advanced technical problems and the field project.

## Admission

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college, have an overall grade point average of at least 2.75 and have the equivalent of two years of appropriate work or military experience. Applicants who have an overall grade point average ranging from 2.5 to 2.75 may be considered for probationary admission if other requirements are met.

Prerequisite courses may be prescribed upon evaluation of undergraduate transcripts if the student does not have a strong background in production management, financial and cost accounting, engineering economy, statistics and a technical area.

## Primary Evaluation Processes

The primary processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following program specific processes: program application; self assessment; degree candidacy; and intent to graduate.

## Requirements

The requirements for this degree include: (a) completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better, a minimum of 15 credits must be in courses open only to graduate students — 700 level; (b) approval for degree candidacy at the appropriate time; and (c) a course distribution as outlined here:

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### Professional Foundations

#### **16 credits**

BUMGT-760	Corporate Planning .....	2
INMGT-700	Organizational Research Methods .....	3
INMGT-705	Enterprise Resource Planning .....	3
INMGT-710	Seminar in Industrial Operation .....	2
INMGT-740	Introduction to Decision Theory .....	3
INMGT-7XX	Program Management .....	3

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### Leadership

#### **Minimum of 2 credits**

BUINB-688	International Business Practicum .....	3
INMGT-600	Organizational Leadership .....	3
INMGT-616	People, Process, Organization Culture .....	2
INMGT-630	Employee Involvement: Work Teams .....	2
INMGT-750	Organizational Development .....	3
RC-781	Risk Management Applications .....	3
TRHRD-560	Training Systems in Business and Industry .....	3

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### Technical Specialty

#### **Minimum of 8 credits**

Students select a technical specialty area depending on their professional goals, educational background and available faculty expertise. The courses within the technical specialty area are selected with the advisement of the program director. Specialties are developed to meet changing business and industrial needs.

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### Research

#### **Minimum of 2 credits**

INMGT-735	Problems in Management Technology .....	2-4
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# Training and Development

## Introduction

**Master of Science Degree** This graduate program is intended for individuals employed in business and industry or the public sector who have a strong career interest in the field of training and development; area business people who wish to acquire credentials in the field of training and development; and individuals who have graduated with various undergraduate majors, including those who have completed a specialization in Training and Human Resource Development.

At the completion of this program, individuals will be able to manage and coordinate training and development programs; analyze training needs; design, deliver and evaluate training programs; and develop training competencies in managers and supervisory personnel.

This 30-credit program may be completed on either a full-time or part-time basis. The training and development program is designed to be completed in one calendar year (*two semesters and a summer session*) of full-time attendance.

## Admission

To be admitted with full status to this program, applicants must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75. Applicants may be admitted on probationary status if their overall grade point average is at least 2.5 but less than 2.75.

## Entrance Requirements:

1. A completed bachelor's degree in a technical or business field or a field related to training and development.
2. Introductory courses in training and development and organizational leadership (*e.g. TRHRD-360/560 Training Systems in Business and Industry and INMGT-400/600 Organizational Leadership*) or equivalent work experience.
3. An introductory course in computer applications or equivalent computer experience.
4. Able to meet all requirements of the UW-Stout Graduate School.

A deficiency in these admission requirements may require completion of additional undergraduate courses, and/or an increase in the number of graduate credits required to earn the degree.

## Primary Evaluation Processes

Processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following specific processes: applicant's goals; related work experience; program plan; student advisement; degree candidacy; and intent to graduate.

## Requirements

Requirements for the degree include: (a) completion of at least 30 semester hours of approved graduate credits with an overall grade point average of 3.0 or better; a minimum of 15 credits must be in 700-level courses open only to graduate students; (b) approval for degree candidacy at the appropriate time; and (c) a course distribution as follows:

### Required Research Preparation

#### 7 credits

INMGT-700	Systems Analysis and Design.....	3
TRHRD-735	Field Problem in Training and Development .....	4

### Required Professional Core Courses

#### 18 credits

INMGT-750	Organizational Development .....	3
MEDIA-710	Learning Technologies .....	3
TRHRD-730	Training Design and Evaluation.....	3
TRHRD-740	Management and Coordination of Training and Development .....	3
TRHRD-746	Seminar in Training and Development .....	1
CTE-534	Performance Analysis .....	3
PSYC-765	Psychology of the Adult Learner or .....	
EDPSY-730	Advanced Psychology of Learning.....	2

### Professional Selectives

#### 5 credits

Choose courses related to training and development with the approval of the program director.

## Degree Program Supervision

Before completing 9 credits, students will prepare a program plan in keeping with degree requirements and the student's special needs. At that time, the program director will suggest courses that will help the student meet employment goals.

# Vocational Rehabilitation

## Introduction

**Master of Science Degree** The Vocational Rehabilitation program is guided by its mission to prepare rehabilitation professionals who will assist and support individuals with disabilities during the rehabilitation process. Emphasis is given to the vocational, social, adjustment and independent living phase of rehabilitation. The program is designed to prepare personnel to assist individuals with disabilities to make and implement their own life choices so as to lead more satisfying lives. It emphasizes understanding vocational issues in order to use them as strategies to empower individuals with disabilities.

It is within the mission to provide programming for individuals preparing to enter professional-level rehabilitation positions as well as personnel currently employed but who wish to upgrade and maintain their professional skills. Four concentrations are currently available which (a) form a rehabilitation foundation; (b) provide opportunities for career advancement and development of leadership potential; and (c) provide a specialization within rehabilitation. These concentrations include rehabilitation counseling, rehabilitation leadership, vocational evaluation and school to work transition. At program completion, each student will (a) define the functional impacts of disabling conditions; (b) understand the process of coordinating community services to serve people who are disabled; (c) analyze jobs and career opportunities to assist in planning and/or developing rehabilitation services; (d) understand rehabilitation philosophy, trends and practices; and (e) apply research findings to improve services to people with disabilities. The goal of each concentration is to prepare rehabilitation professionals who have the knowledge, skills and experiences necessary to work effectively in the field. The concentration in rehabilitation counseling is accredited by the Council on Rehabilitation Education (CORE).

The master of science degree program in vocational rehabilitation is a 48-credit program. A maximum of six credits can be waived by the program director due to completion of equivalent graduate or undergraduate work with a grade of "B" or better. Both part-time and full-time students are accommodated through course scheduling, although the vocational evaluation concentration does require a one-semester, on-campus practical experience. Students may elect to complete more than one concentration by completing the prescribed course work. At least one elective is available for each student to pursue a personal interest area that will complement the established program. Each concentration includes learning experiences in professional settings as part of the 27-credit concentration. Students have the option to focus on a particular rehabilitation setting (*e.g., independent living, community-based programs, state agencies, proprietary agencies*).

## Admission

A program-specific application (*obtained from the program director*) is required in addition to the Application for Admission to the Graduate School. In order to assure completion of the review process, the Graduate School and the vocational rehabilitation program applications, including all supporting documents, must be received six weeks prior to the start of the term for which admission is requested.

Entrance into the program requires the unanimous vote of approval by the Vocational Rehabilitation Admissions Committee. Approval will be dependent upon:

1. demonstrated potential for successful academic achievement at the graduate level;
2. interest in working with people with disabilities;
3. personal and social characteristics necessary to work with people with disabilities, such as personal and social maturity and a combination of patience, empathy and understanding;
4. ability to work independently;
5. ability to carry out professional responsibilities.

The decision for admission or denial of admission by the Vocational Rehabilitation Program Admissions Committee will be based on the criteria above with information obtained from records of undergraduate and/or other graduate academic attainment, letters of reference from a minimum of three persons who are familiar with the applicant in work or educational settings, information provided on the program application form, and other data and information received by the committee. The committee may require an interview in any case where information submitted is insufficient for rendering a decision.

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

Students from a variety of educational backgrounds are eligible for admission. Applicants with degrees such as vocational rehabilitation, psychology, sociology, business, industrial technology, vocational education, special education, occupational therapy, physical therapy, communication disorders, recreational therapy and social work can find appropriate applications within the program. Although a specific educational background is not required, the applicant's transcripts will be evaluated to determine if deficiency work at the undergraduate level, or additional graduate work, will be required to earn a degree. Deficiency requirements may differ among the various concentrations.

## Primary Evaluation Processes

The primary processes used to evaluate program and academic progress include course grades, research evaluation, certification of program completion, and the following program specific processes: program application; practicum evaluation; internship evaluation; degree candidacy; and intent to graduate.

Prior to the granting of degree candidacy, a preliminary oral examination is conducted by the Vocational Rehabilitation Program Retention Committee. The committee will evaluate (a) the acquisition of a knowledge base as identified in program and concentration objectives; (b) existence of interests, aptitudes and personality consistent with requirements for successful practice in rehabilitation; (c) demonstrated potential for successful practice in the field of rehabilitation; and (d) the meeting of all Graduate School requirements for degree candidacy. A copy of the committee procedures is available from the program director.

## Requirements

The requirements for this degree include (a) completion of a minimum of 48 semester hours of graduate credit (a maximum of 6 credits may be waived, resulting in a 42-credit program); (b) an overall grade point average of 3.0 or better; (c) at least half of the credits must be in courses open only to graduate students-700 or 800 level; (d) a minimum grade of "B" or better in laboratory, practicum and internship courses; (e) approval for degree candidacy at the appropriate time; (f) completion of the professional core; and (g) a course distribution as outlined for the specific concentration.

### Preparation in Research

#### 3-10 credits

EDUC-740	Research Foundations <i>or</i>	
MFT-765	Research in Psychotherapy <i>or</i>	
PSYC-750	Principles of Program Evaluation <i>or</i>	
EDUC-742	Program Evaluation	3-4

Choose one of the following options:

REHAB-735	Problems in Vocational Rehabilitation <i>or</i>	
REHAB-770	Thesis in Vocational Rehabilitation	2-6

*or*

Comprehensive Exam: A student may choose to take a culminating comprehensive examination in lieu of completing a Plan B Problem or a Plan A Thesis.

### Preparation Basic to Program

#### 15 credits

REHAB-701	Foundations of Rehabilitation	3
REHAB-713	Aspects of Disability: Physical Disability	3
REHAB-714	Aspects of Disability: Cognitive Disability	3
REHAB-717	Occupational Analysis and Job Placement	3
REHAB-764	Case Coordination	3

## Concentrations

### Rehabilitation Counseling

#### 27-30 credits

COUN-750	Counseling Theory	3
COUN-788	Counseling Process Lab <i>or</i>	
REHAB-708	Practicum in Rehabilitation Counseling	3
REHAB-620	Psychological Testing – People With Exceptional Needs	3
REHAB-723	Procedures of Vocational Evaluation	3
REHAB-783	Internship in Vocational Evaluation	6
REHAB-787	Internship in Rehabilitation Counseling	6
XXX-XXX	Approved Electives	3-6

### Rehabilitation Leadership

#### 27-30 credits

INMG-630	Employee Involvement and Work Teams	3
INMG-600	Organizational Leadership	3
PSYC-685	Recruitment and Selection of Human Resources	3
REHAB-602	Management of Nonprofit Organizations	3
REHAB-705	Practicum in Rehabilitation Leadership	3
REHAB-780	Administration in Vocational Rehabilitation <i>or</i>	
REHAB-688	Developing Collaborative Partnerships	2-3
REHAB-785	Internship – Rehabilitation Leadership	6
XXX-XXX	Approved Electives	4-7

### Vocational Evaluation

#### 27-30 credits

COUN-750	Counseling Theory	3
REHAB-620	Psychological Testing – People With Exceptional Needs	3
REHAB-670	Work Adjustment Services	3
REHAB-707	Practicum in Vocational Evaluation	4
REHAB-723	Procedures of Vocational Evaluation	3
REHAB-724	Laboratory in Vocational Evaluation	3
REHAB-783	Internship in Vocational Evaluation	6
XXX-XXX	Approved Electives	2-5

### School to Work Transition

#### 25-27 credits

CTE-502	Principles of Career/Technical Education	2
CTE-560	Coop Occupational Education Program	2
SCOUN-733	Career Development Process and Issues	3
EDUC-742	Program Evaluation	3
SPED-524	Curr and Inst: Career and Transition Education	3
SPED-528	Assessment for IEP/ITP	3
REHAB-688	Developing Collaborative Partnerships	2
REHAB-670	Work Adjustment Services	3
REHAB-723	Procedures of Vocational Evaluation	3
REHAB-798	Field Experience <i>or</i>	
REHAB-749	Coop Education Experience	1-12
XXX-XXX	Approved Electives	1-4

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## **Other Requirements and Program Policies**

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### **1. Degree Without Concentration**

*Students applying to the master of science program in Vocational Rehabilitation without a specific concentration are required to submit their personal program objectives as part of the program application process. These will be used to determine if the program will be beneficial in helping students reach their objective and as an aid in developing the individual's program plan.*

### **2. Program Policy for Waived Credits**

*A maximum of six credits can be waived by the program director due to completion of equivalent graduate or undergraduate work with a grade of "B" or better.*

### **3. Program Policy for Electives**

*Elective course work must contribute to the objectives of the program and needs of its students.*

### **4. Deficiency Course Work and Additional Admission**

#### **Requirement for the Rehabilitation Leadership Concentration**

*Undergraduate deficiency course work is required for the Rehabilitation Leadership concentration. The student is required to have course work in accounting, finance and marketing. A minimum of two years of paid work experience in rehabilitation services or in a leadership or management position is required of applicants to the Rehabilitation Leadership concentration.*

### **5. Teaching Certification in the**

#### **School to Work Transition Concentration**

*Additional courses may be taken for a teaching certificate in the School to Work Transition concentration. Some school districts prefer a certified or licensed teacher, depending on the state in which one works. A teaching certificate is recommended in the state of Wisconsin.*

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### **Sixty Credit Program**

With the advice and approval of the program director, students wishing to complete a 60-credit M.S. in Vocational Rehabilitation will identify appropriate coursework that develops an emphasis that meets the students' goals.

## Health Science Occupations Education

This specialization is intended for licensed secondary teachers who are teaching or interested in teaching health science occupation (HSO) related coursework. Individual school districts determine the licensure needed by an individual teaching HSO related coursework. Completion of the specialization does not result in Wisconsin Department of Public Instruction certification. Courses are offered online. The field experience will take place in a health care facility.

tion of the specialization does not result in Wisconsin Department of Public Instruction certification. Courses are offered online. The field experience will take place in a health care facility.

## Requirements for the Specialization

**12 credits required**

Intended Outcome	Learning Activity	Evaluation
Demonstrate knowledge, understanding, and competence in the following:		
1. The demands and responsibilities of working in a health care facility	CTE-398/598 Field Experience..... 1-2 CTE-310/510 Foundations of Health Science Occupations Education..... 3	Successful completion of courses is required. Artifacts for the professional portfolio are identified on course outlines.
2. National Health Care Skill Standards	CTE-310/510 Foundations of Health Science Occupations Education..... 3 CTE-320/520 Careers in Health Care ..... 3	Successful completion of courses is required. Artifacts for the professional portfolio are identified on course outlines.
3. Curriculum planning in health science occupations	CTE-330/530 Curriculum Planning in Health Science Occupations ..... 3	Successful completion of course is required. Artifacts for the professional portfolio are identified on course outline.
4. Organizational structure and administration of health care and role of health care professionals	CTE-310/510 Foundations of Health Science Occupations Education..... 3	Successful completion of course is required. Artifacts for the professional portfolio are identified on course outline.
5. Student career development	CTE-320/520 Careers in Health Care ..... 3	Successful completion of course is required. Artifacts for the professional portfolio are identified on course outline.
6. Organization and supervision of work-based learning	CTE-360/560 Cooperative Occupational Education Programs ..... 2	Successful completion of course is required. Artifacts for the professional portfolio are identified on course outline.

## Training and Human Resource Development

Education is not the sole province of schools. Programs of instruction are conducted by many businesses, industries, in the military, and by other groups and organizations. Planning and providing this instruction is the province of professionals usually identified as "trainers." In our technological society, training programs have become increasingly complex and demands on trainers have increased. Greater expertise on their part is required. This all-university specialization addresses

needs for preservice and in-service education for trainers.

This program is intended for students who have expertise in areas such as engineering, technology, education, business, government, military and labor, and who desire to become involved in development and implementation of training programs. Contact the specialization director for further information.

## Requirements for the Specialization

**Note:** Courses numbered 700 and greater are open to graduate students only.

Intended Outcome	Learning Activity	Evaluation
1. Introduction to concepts of training and human resource development.	TRHRD-360/560 Training Systems in Business and Industry .....3 Select one of the following: INMG-T400/600 Organizational Leadership or PSYC-382/582 Human Resource Management .....3	Successful completion of courses at left (6 credits).
2. Design and develop training activities.	MEDIA-360/560 Introduction to Media in Education and Training .....2 Complete a course from the appropriate school in curriculum development or course construction (2-3 credits) such as: MEBE-401 Marketing Education Curriculum..... 2-3 CTE-438/638 Course Construction for Vocational Educators.....2	Successful completion of courses at left (minimum 4 credits).
3. Implement and facilitate training activities.	Select one of the following: MEBE-301 Marketing Education Methods .....3-4 TRHRD-370/570 Training Methods in Business and Industry .....2 CTE-405/605 Methods of Teaching Vocational Education.....2	Successful completion of a course at left (minimum 2 credits).
4. Evaluate the effectiveness of training activities.	CTE-440/640 Instructional Evaluation in Vocational Education .....2	Successful completion of the course at left (2 credits).
5. Apply concepts of training in the professional area.	TRHRD-XXX Co-op/Internship in Training..... 1-8	Successful completion of the contractual agreement of the internship as evaluated by the business, industry, government or military supervisor, and the UW-Stout supervisor. Completion of a field report is required.

## Vocational Evaluation/Rehabilitation Technology

The impact of technology has changed assessment and service delivery in the field of rehabilitation. A philosophical shift to a more empowering stance with persons with disabilities has occurred as a result of the evaluation of their skills and abilities and the enhancement of those skills through assistive technology. This specialization educates and

trains vocational rehabilitation professionals and students in skills to meet the needs of people with disabilities, and to provide the services that are being demanded by employers, as well as persons with disabilities for use in the labor market and in accordance with the Americans with Disabilities Act.

### Requirements for the Specialization

Intended Outcome	Learning Activity	Evaluation
<b>Development of tool modification and accommodation:</b> demonstrate familiarity with and use of testing accommodations or modifications to facilitate the vocational exploration of persons with disabilities through the modification of tests, work samples, job sites and training materials, as appropriate.	"The Use of Assistive Technology" workshop, resulting in a report detailing the use and modification of testing strategies <i>or</i> REHAB-360/560 Assistive Technology ..... 2	Faculty review and approval of report on use and modification of evaluation tools <i>or</i> Grade of "C" or better
<b>Communication of rehabilitation plan objectives and recommendations:</b> demonstrate the ability to incorporate the potential of assistive technology to enhance performance potential in the vocational choices of persons with disabilities.	"The Use of Assistive Technology" workshop, resulting in reports that include recommendations for the use of assistive technology <i>or</i> REHAB-360/560 Assistive Technology ..... 2	Faculty review and approval of report on use and modification of evaluation tools <i>or</i> Grade of "C" or better
<b>Vocational rehabilitation process and philosophy:</b> outline and describe philosophical movements associated with vocational rehabilitation in the United States, describe the role of vocational rehabilitation/assessment in a diverse cultural environment, and describe the need that persons with disabilities have to be a part of society, focusing on strengths and assets that people bring with them to any situation.	Research paper describing process and philosophy <i>or</i> Demonstrated work experience of three or more years and professional development credentials <i>or</i> REHAB-101 Introduction to Rehabilitation ..... 3	Faculty review and approval of research paper <i>or</i> work experience and professional credentials <i>or</i> Grade of "C" or better
<b>Occupational Information:</b> find and use various sources of national, state and local occupational information; link rehabilitation recommendations to the local labor market of the person being served.	Demonstrate work experience as a job developer or placement specialist of two or more years <i>or</i> "Job Development and Placement and Occupational Information" workshop resulting in appropriate work recommendations in a written report <i>or</i> REHAB-310 Vocational Evaluation <i>or</i> REHAB-410 Job Placement ..... 3	Faculty review of work experience <i>or</i> faculty review and approval of report recommendations <i>or</i> Grade of "C" or better
<b>Functional aspects of disability:</b> develop knowledge of the functional characteristics of disability and understand the impact of evaluating the skill and abilities of a person with a disability.	Research paper on effect of disabling condition(s) in vocational rehabilitation <i>or</i> Test out with faculty-developed standardized test <i>or</i> REHAB-230 Psychosocial Aspects of Disability ..... 3	Faculty review and approval of research paper <i>or</i> 80 percent or better on the standardized test <i>or</i> Grade of "C" or better
<b>Individualized vocational rehabilitation/evaluation planning:</b> identify and delineate the individual needs of a person with a disability; state those needs in a plan for testing skills and abilities in relation to the accomplishment of a task or goal.	"Rehabilitation Planning" workshop resulting in written vocational rehabilitation plan <i>or</i> Work experience of two or more years, one letter of reference from a supervisor, three letters of reference from professional referral sources, and five letters of reference from consumers of services <i>or</i> REHAB-310 Vocational Evaluation ..... 3	Faculty review and approval of written rehabilitation plan of three separate case studies provided during workshop <i>or</i> Faculty review and approval of work experience and letters of reference <i>or</i> Grade of "C" or better
<b>Vocational interviewing:</b> demonstrate the development of rapport, provision of agency and assessment information, initial identification of client strengths and limitations through the vocational interview; and create an understanding of the process of vocational rehabilitation through the vocational interview.	"Vocational Interviewing and Facilitating Career Decision Making with Clients" workshop resulting in the videotaping of a vocational interview <i>or</i> Demonstrate evidence of past work experience as a vocational counselor for two or more years <i>or</i> Complete college level course work in vocational interviewing	Faculty review and approval of videotaped vocational interview <i>or</i> Faculty review and approval of work experience <i>or</i> Faculty review and approval of college level course work
<b>Vocational report development and communication:</b> interpret, analyze, and synthesize participant data in a coherent and concise manner that addresses needs, strengths, and assets of the participant and develops pertinent recommendations through a report shared orally and in writing with the participant/client and referral source/rehabilitation counselor.	"Vocational Rehabilitation Report Development and Communication" workshop <i>or</i> Four written reports addressing needs of four case studies presented during the workshop <i>or</i> REHAB-310 Vocational Evaluation ..... 3	Faculty review and approval of the written report options and letters of reference <i>or</i> Grade of "C" or better



Intended Outcome	Learning Activity	Evaluation
<b>Standardized testing:</b> become familiar with the procedures for administering and interpreting standardized tests and application of tests to persons with disabilities, understand the impact of the disabling condition and the use of the most appropriate test, and develop a report explaining the impact of testing and using results with a vocational rehabilitation report.	<p>Previous college course work in the use of psychometric testing and principles of validity and reliability <i>or</i></p> <p>“Standardized Testing” workshop and paper describing use of standardized tests with persons with disabilities <i>or</i></p> <p>Past work experience of two years or more where responsibilities include administering and interpreting standardized tests with a supervisor’s letter and at least one referral source/rehabilitation counselor <i>or</i></p> <p>REHAB-420/620 Psychological Testing – People with Exceptional Need ..... 3</p>	<p>Faculty review and approval of previous course work <i>or</i></p> <p>Faculty review and approval of workshop paper <i>or</i></p> <p>Faculty review and approval of work experience and letters of recommendation <i>or</i></p> <p>Grade of “C” or better</p>
<b>Job and Training Analysis:</b> perform a job analysis and develop a training analysis on a given job and do a written report; use the job analysis to determine the most appropriate evaluation tools to use with a person with a disability to measure performance ability; determine appropriate training or education to prepare for the job.	<p>Read <i>A Guide to Job Analysis</i> or <i>The Revised Handbook for Analyzing Jobs</i>, participate in an online discussion of the materials and procedures of job analysis, select a job in the community that reflects occupational choices of agency participants, prepare a job analysis report, select and describe evaluation tools most appropriate for someone interested in the occupation <i>or</i></p> <p>REHAB-410 Job Placement ..... 3</p>	<p>Faculty review and approval of the job and training analysis report and online discussion <i>or</i></p> <p>Grade of “C” or better</p>
<b>Functional Skills:</b> use appropriate tools and strategies to evaluate the functional daily living skills of an individual with a disability, select appropriate method to determine level of functional skill, develop and use situational assessment to establish an understanding of the individual functional skills of a person with a disability.	<p>“Functional Skills Assessment” workshop and report <i>or</i></p> <p>Demonstrate evidence of past work experience of two or more years involving vocational evaluation/ functional skills assessment and/or situational assessment with two letters of reference from referral sources <i>or</i></p> <p>REHAB-470/670 Work Adjustment Services ..... 3</p>	<p>Faculty review and approval of report <i>or</i></p> <p>Faculty review and approval of work experience and letters of reference <i>or</i></p> <p>Grade of “C” or better</p>
<b>Assessment of Learning:</b> demonstrate awareness of learning styles and modalities of teaching through use of selected tests, modify test administration to the demands of the learning/teaching situation.	<p>Previous college-level course work in educational psychology, special education, adult or vocational education that address issues of learning and learning styles and use of learning assessments <i>or</i></p> <p>Paper describing learning styles and assessment of such styles, with assessment tool selection and modification</p>	<p>Faculty review and approval of course work <i>or</i></p> <p>Faculty review and approval of paper</p>
<b>Work samples and work sample systems:</b> demonstrate appropriate use of work samples and work sample systems as means of assessment within a given occupation, demonstrate appropriate use of work samples and systems with different types of disabling conditions.	<p>“Work Sample and Work Sample Systems” workshop and research paper <i>or</i></p> <p>REHAB-310 Vocational Evaluation ..... 3</p>	<p>Faculty review and approval of research paper <i>or</i></p> <p>Grade of “C” or better</p>
<b>Behavioral Observation:</b> observe and note behaviors of individuals during the assessment process as asset or limitation behaviors in relation to the accomplishment of a target goal.	<p>Read appropriate, assigned material and develop a written behavior observation of five clients where observations were critiqued by at least two other professionals, including the referring counselor <i>or</i></p> <p>Demonstrate evidence of work experience in vocational rehabilitation/evaluation where duties included writing and/or noting behavioral observations, with a letter from a supervisor and two from referral sources attesting to accuracy and usability of the written behavioral observations, including examples of written behavioral observations</p>	<p>Faculty review and approval of observations, critiques and reports <i>or</i></p> <p>Faculty review and approval of work experience, letters of reference, and examples of written behavioral observations</p>

# Professional Development Certificates

## Introduction

UW-Stout offers "professional development certificate" programs in addition to its traditional majors and minors to meet the needs of those who wish to obtain additional knowledge and skills needed for personal growth and professional advancement.

While not a substitute for a degree or diploma, the certificate is an alternative credential for individuals seeking to obtain new knowledge and skills or to update their knowledge and skills in a specific area. Typically, a certificate is earned by completing a set of limited, well defined learning outcomes focused on new or emerging processes or new knowledge and principles applied to practical problems or issues.

These course sets lead to a certificate only. If you're interested in a Master's or Education Specialist degree, please refer to the degree

## Cisco Certified Network Associate Exam Preparation Certificate

The Cisco Certified Network Associate (CCNA) Exam Preparation Certificate prepares students to pass examinations through the use of lecture, online curriculum, and laboratory exercises. In order to earn the certificate, students must pass the following courses and professional exams:

TCS-131	Network operating System Fundamentals .....	2
TCS-141	Networking Fundamentals I .....	2
TCS-142	Networking Fundamentals II .....	2
TCS-143	Networking Fundamentals III .....	2
TCS-144	Networking Fundamentals IV .....	2
<b>Exam:</b> Cisco CCNA		

**For more information:** Steve Schlough, schloughs@uwstout.edu, 715/232-1484

## Cisco Certified Design Associate Exam Preparation Certificate

The Cisco Certified Design Associate (CCDA) Exam Preparation Certificate prepares students to pass examinations through the use of lecture, online curriculum, and laboratory exercises. In order to earn the certificate, students must pass the following courses and professional exams:

TCS-131	Network operating System Fundamentals .....	2
TCS-141	Networking Fundamentals I .....	2
TCS-142	Networking Fundamentals II .....	2
TCS-143	Networking Fundamentals III .....	2
TCS-144	Networking Fundamentals IV .....	2
<b>Exam:</b> Cisco CCNA		
TCS-382/582	Network System Design .....	3
<b>Exam:</b> Cisco DCN		

**For more information:** Steve Schlough, schloughs@uwstout.edu, 715/232-1484

## Cisco Certified Network Professional Exam Preparation Certificate

The Cisco Certified Network Professional (CCNP) Exam Preparation Certificate prepares students to pass examinations through the use of lecture, online curriculum, and laboratory exercises. In order to earn the certificate, students must pass the following courses and professional exams:

TCS-441/641	Scalable Internetworks .....	3
<b>Exam:</b> Cisco Routing		
TCS-442/642	Remote Access Networks .....	3
<b>Exam:</b> Cisco Remote Access		
TCS-443/643	Multi-Layer Switched Networks .....	3
<b>Exam:</b> Cisco Switching		
TCS-444/644	Internetwork Troubleshooting .....	3
<b>Exam:</b> Cisco Support		

**For more information:** Steve Schlough, schloughs@uwstout.edu, 715/232-1484

## Cisco Certified Design Professional Exam Preparation Certificate

The Cisco Certified Design Professional (CCDP) Exam Preparation Certificate prepares students to pass examinations through the use of lecture, online curriculum, and laboratory exercises. In order to earn the certificate, students must pass the following courses and professional exams:

TCS-441/641	Scalable Internetworks .....	3
<b>Exam:</b> Cisco Routing		
TCS-442/642	Remote Access Networks .....	3
<b>Exam:</b> Cisco Remote Access		
TCS-443/643	Multi-Layer Switched Networks .....	3
<b>Exam:</b> Cisco Switching		
TCS-445/645	Internetwork Design .....	3
<b>Exam:</b> Cisco Design		

**For more information:** Steve Schlough, schloughs@uwstout.edu, 715/232-1484

## E-Learning and Online Teaching

The use of the Internet to deliver education and training in fully online or web-enhanced formats is growing at a tremendous rate in all sectors of our society. An increasing number of K-12 schools and post-secondary institutions are using web-based technologies to facilitate learning, particularly at the secondary and post-secondary levels. Consequently, there is a growing need for highly skilled online distance educators to support online teaching and training across the nation and around the world. At the completion of the graduate certificate program candidates will demonstrate the knowledge and skills to effectively teach or train online and serve as leaders in distance learning initiatives.

EDUC 760	E-Learning for Educators .....	3
EDUC 761	Creating Collaborative Communities in E-Learning .....	3
EDUC 762	Assessment in E-Learning .....	3
EDUC 763	Instructional Design for E-Learning .....	3
EDUC 764	E-Learning Practicum .....	3

**Note:** The practicum may only be taken after all other courses are completed.

**For more information:** Dennis O'Connor, oconnord@uwstout.edu, 530/318-1145

## Foundations in Hospitality and Tourism

The Foundations in Hospitality and Tourism is a graduate-level certificate designed to introduce key management foundations for operations and services administration. The certificate will serve those individuals employed within industry who seek advanced techniques that can be directly applied toward the working environment. The 12-credit certificate includes the following courses:

HT-700	Issues in Hospitality and Tourism .....	3
HT-701	Hospitality and Tourism Research Interpretations .....	3
HT-754	Managing Technology in Hospitality .....	3
HT-755	Leadership in Service Industries .....	3

**For information:** Robert Davies, [daviesb@uwstout.edu](mailto:daviesb@uwstout.edu), 715/232-1480

## Gaming Management

The professional development certificate in Gaming Management will provide gaming personnel, graduate and undergraduate students, and international audiences with an understanding of the operational and management aspects of casino gaming while addressing the historical, legal, economic, social, psychological, and tourism impacts that gaming entertainment has on communities and societies.

HT-315/515	Gaming Management .....	3
HT-316/516	Casino Operations Management .....	3
HT-317/517	Psychosocial Issues in Gaming .....	3
HT-418/618	Casino Tourism .....	3

**For information:** Sharon Giroux, [giroux@uwstout.edu](mailto:giroux@uwstout.edu), 715/232-2089

## Human Resource Management

The Human Resource Management certificate program provides a broad base of knowledge to professionals seeking to expand their management competencies. The coursework is essential to prepare for the Professional Human Resource (PHR) exam, developed by the Society for Human Resource Management (SHRM) and recognized nationally as a significant credential for professional advancement in human resources. Competencies required by human resources professionals are best defined by content of the SHRM examination, and they are the same competencies covered in the coursework required for the certificate. The certificate in no way implies or guarantees that the student will pass the exam but should be seen as an important professional accomplishment.

The following courses provide the student with knowledge in all of the tested areas:

PSYC-381/581	Industrial Psychology .....	2
PSYC-382/582	Human Resource Management .....	3
PSYC-403/603	Management of Employee Reward Systems .....	3
PSYC-485/685	Recruitment and Selection of human Resources .....	3
TRHRD-360/560	Training Systems in Business and Industry .....	3
ECON-421/621	Collective Bargaining and Labor Relations .....	2
RC-381/581	Occupational Safety/Loss Control .....	2-3

**For more information:** Mitchell Sherman, [shermanm@uwstout.edu](mailto:shermanm@uwstout.edu), 715/232-2658

## Quality Management

The Quality Management certificate program provides specific and focused content and activities to enable participants to develop competencies and skills commonly required for quality professionals. Completion of the certification program will prepare participants to pursue further credentials in the quality area, including American Society for Quality (ASQ) certification tests. Students earn the certificate by completing the following courses with a B- or better in each course:

INMGT-120	Quality Concepts .....	3
INMGT-320/520	Quality Tools .....	3
INMGT-325/525	Quality Management .....	3
INMGT-410/610	Six Sigma Quality Improvement Methods .....	3
INMGT-420/62	Quality Assurance Practicum .....	3-4

**For more information:** John Dzissah, [dsissahj@uwstout.edu](mailto:dsissahj@uwstout.edu), 715/232-1265

## Service Administration

The Service Administration is a graduate-level certificate designed to address operational issues in tangible and intangible services administration. The certificate will serve those individuals employed within industry who seek advanced techniques that can be directly applied toward the working environment. The 12-credit certificate includes the following courses:

SRVM-554	Services Marketing Management .....	3
SRVM-610	Electronic Service Management .....	3
SRVM-620	International Service Concepts .....	3
SRVM-621	Customer Interaction Center Management or	
HT-747	Seminar in Hospitality Management .....	3

**For information:** Robert Davies, [daviesb@uwstout.edu](mailto:daviesb@uwstout.edu), 715/232-1480

## Strategic Management in Hospitality

The Strategic Management in Hospitality is a graduate-level certificate designed to address strategic positioning for hospitality operations and services administration. The certificate will serve those individuals employed within industry who seek advanced techniques that can be directly applied toward their working environment. The 12-credit certificate includes the following courses:

HT-751	Strategic Management in Hospitality .....	3
HT-753	Managing Finance in the Hospitality Industry .....	3
HT-756	Quality Assurance and Customer Service .....	3
HT-758	Hospitality Operational Systems .....	3

**For information:** Robert Davies, [daviesb@uwstout.edu](mailto:daviesb@uwstout.edu), 715/232-1480

## Supply Chain Management

The Supply Chain Management certificate provides students with expertise to assume, concurrently with other technical and professional responsibilities, the management of components within their supply chain. Course work coincides with American Production and Inventory Control Society objectives for its certification examination.

INMGT-305/505	Production and Inventory Control .....	3
INMGT-405/605	Production and Inventory Control Practicum .....	2
INMGT-320/520	Quality Tools .....	3
BUMKG-337/537	Purchasing and Supply Chain Management .....	3
INMGT-325/525	Quality Management.....	3
BUMKG-438/638	Principles of Logistics.....	3

### Selectives

*Select at least 5 credits from the list of courses supplied by the department.*

**For more information:** Jim Keyes, [keyesj@uwstout.edu](mailto:keyesj@uwstout.edu), 715/232-5165

## **AEC Architecture, Engineering and Construction**

### **AEC-570 Construction Estimating I (3 cr.)**

Fall and Spring

Estimating and analyzing material, labor, equipment, methods of construction, overhead and profit, and submitting these factors in the form of a bid.

### **AEC-575 Construction Practicum (2-4 cr.)**

Summer

Technical information, construction problems and actual development of light residential structure.

### **AEC-595 Seminar (1-2 cr.)**

Summer

(Title will reflect specific construction content). Current and projected methods, concepts, technologies and innovations in construction. **R**

### **AEC-638 Contract Requirements and Specifications (3 cr.)**

Fall and Spring

Principles of contract requirements and construction specification organization. Development of basic skills of project manual preparation. Demonstration of role of specifications within the construction process and relationship to other construction contract documents.

### **AEC-652 Environmental Systems — HVAC (3 cr.)**

Spring

Principles of heating, ventilating and air conditioning; analysis and selection of systems and equipment.

### **AEC-653 Environmental Systems — Plumbing and Electrical (3 cr.)**

Spring

Plumbing, electrical and illumination systems for light and heavy construction.

### **AEC-658 Structural Systems — Wood and Steel (3 cr.)**

Fall

Analysis, selection, and delineation of wood and steel structural components and systems in buildings.

### **AEC-659 Structural Systems-Concrete and Masonry (3 cr.)**

Fall and Spring

Analysis, selection, and delineation of concrete and masonry structural components and systems in buildings.

**AEC-670 Construction Estimating II (2 cr.)**

Fall and Spring

Computer-based estimating systems for construction. Take-off, pricing, bid preparation, resource and cost studies, and database operations.

**AEC-671 Project Scheduling and Cost Control (3 cr.)**

Fall and Spring

Total concept of construction industry: contracting, financing, bidding, planning, organizing, coordinating, and controlling functions and techniques.

Prerequisites: take AEC-570.

**AEC-672 Management of Construction (3 cr.)**

Fall and Spring

Organizing, managing and operating the contracting firm.

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Back to [Course Descriptions](#)

---

The Graduate Bulletin

Revised: December 2008

## **ANTH Anthropology**

### **ANTH-620 The Anthropological Study of Family Systems 3 cr.**

Fall

Anthropological, cross-cultural view of family systems, with attention to their organization, functions, dynamics and articulation with other institutions.

### **ANTH-630 Ojibwe Lifeways 4 cr.**

Summer

Indepth, interactive study of Ojibwe culture within a Wisconsin reservation community. \$

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: July 2008



## **APRL Apparel Design/Manufacturing**

### **APRL-545 Textiles For Interiors** 2 cr.

Spring

Raw materials, fabric structures, specifications, and legislation related to quality, performance, and maintenance of textiles for commercial and household uses.

### **APRL-555 Special Topics in Apparel Design/ Manufacturing** 1-3 cr.

Special topics in clothing and textiles. Repeatable for different topics. **R**

### **APRL-567 Engineered Tailoring** 3 cr.

Fall

Industrial production methods applied to construction of tailored garments.

### **APRL-581 Functional Clothing Design** 3 cr.

Fall

Application of physical science theory to problems in clothing design: impact protection and thermal balance of the human body, structural properties of materials, and apparel forms.

### **APRL-582 Advanced Pattern Development** 3 cr.

Fall and Spring

Develop advanced patterns for garments by draping fabric and using a computer-aided design system.

### **APRL-585 CAD for Apparel Images** 3 cr.

Fall and Spring

Create apparel and patterned textile images using CAD to create professional presentations appropriate to the fashion industries.

### **APRL-590 Practicum in Textile Design** 3 cr.

Use of textile design techniques as means of artistic expression: stitchery, weaving, knotting, applique and hooking; emphasis on good design and creativity.

### **APRL-594 Knit Design and Technology** 3 cr.

Fall and Spring

Stitch formation and patterning of warp and filling knits. Influences on aesthetics and performance of knit fabrics. Design and production of knitted fabric and garments on a flat bed knitting machine, including use of CAD techniques.

### **APRL-605 International Study Tour to the Fashion Industry** 1-6 cr.

Spring

Tour of international centers of clothing, textiles, and related arts. Study of the cultural patterns. Program includes lectures by consultants and seminars on the various phases of the fashion and fabric industries. **R**

**APRL-610 History of Costume--Ancient to European 3 cr.**

Fall

Development of costume throughout the ages: fashion as it reflects past cultures and influences present day costume.

**APRL-619 National Study Tour to Fashion Industry 1 cr.**

Fall and Spring

Five-day visit to New York or alternate city: study hours, discussions and lectures by leaders in American fashion market. **R**

**APRL-670 Portfolio Development For Apparel Design And Development 3 cr.**

Fall and Spring

A capstone course: resume and job search development; organization and updating projects from previous courses; creation of new portfolio projects that display a high level of apparel design and development skills and competencies.

**APRL-674 Apparel Product Development 3 cr.**

Spring

Capstone course incorporating soft goods industrial and managerial techniques for production simulation of apparel product development.

**APRL-680 Draping 3 cr.**

Fall

Application of draping principles in design and construction of garments; emphasis on creativity.

**APRL-685 Apparel Design Studio 3 cr.**

Spring

Creation, development, and formal presentation of original designs using flat pattern and/or draping techniques. Preparation of professional portfolio to include CAD and other illustrative materials representative of individual expertise.

**APRL-695 Historic and Contemporary Fabrics 3 cr.**

Fall

Analysis of designs and techniques of decorating historic and contemporary fabrics; contribution of decorative fabrics to enrichment of human experience.

**APRL-735 Problems in Textiles, Clothing and Retail Marketing 2 cr.**

Fall, Spring and Summer

Identification, selection and completion of a problem in textiles, clothing, and retail marketing culminating in a Plan B paper. Prerequisites: take EDUC-740. **\$**

**APRL-769 Design Option Thesis 2-6 cr.**

Fall, Spring and Summer

Independent research under direction of investigation adviser. Culminating in a design show. A descriptive paper written according to thesis standards, including slides, will be presented. Consent of Program Director. Prerequisites: take EDUC-740. **\$**

**APRL-780 Advanced Draping 1 cr.**

Manipulation of various fabrics on a dress form to develop garments from given and self-designed sketches that reflect advanced techniques. Construct garments from patterns.

Prerequisites: take APRL-680.

**APRL-781 Advanced Flat Pattern** 2 cr.

Draft and develop paper patterns for garments by varying a master pattern from given and self-designed sketches that reflect advanced techniques. Construct garments from pattern. Instructor's consent required.

**APRL-790 Seminar in Textiles, Clothing and Retail Marketing** 2 cr.

Review, evaluation and interpretation of current research in textiles, clothing and retail marketing.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: December 2008

## **BIO Biology**

### **BIO-560 Introduction to Neuroscience 3 cr.**

Investigation of the human nervous system at the molecular, cellular and system level. Organization and function of neuronal cells, sensory receptors, sensory and motor pathways and integration centers. Introduction to electro- physiology, biochemistry of neurotransmitters and receptors, neuropharmacology, development of the nervous system, and consequences of neuronal disease and trauma.

### **BIO-561 Psychobiology 2 cr.**

Biological basis of human and animal behavior: evolution of physiological and behavioral adaptations of organisms to their environment.

### **BIO-562 Advanced Physiology 3 cr.**

Fall and Spring

Human physiology with emphasis on integration of the nervous, muscular, cardiovascular, immune, renal, respiratory, digestive and endocrine systems. Cellular and molecular processes are studied. Computer simulations and experiments in frog physiology will be utilized.

### **BIO-606 Food Microbiology 3 cr.**

Methods of food preservation, their effectiveness and related food spoilage by microorganisms. Quality control techniques used to determine presence of specific groups of economically important microorganisms.

### **BIO-720 Toxicological Effects on Humans 3 cr.**

Fundamental principles of toxicology as applied to human physiology and health.

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**Back to [Course Descriptions](#)**

---

**The Graduate Bulletin**

**Revised: March 2010**

## **BUACT Business Accounting**

### **BUACT-546 Seminar 1-3 cr.**

Current topics in business accounting. (Title will reflect specific content.)

### **R**

### **BUACT-730 Financial and Cost Analysis 3cr.**

Overview of financial accounting concepts and analysis combined with a strong emphasis on manufacturing costs and managerial decision-making. Application of cost information in the strategic planning and measurement process for corporations, including capital budgeting.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Reviewed: August 2010

## **BUINB Business International Business**

### **BUINB-538 International Logistics (3 cr.)**

Spring

International logistics strategy: customer service, inventory, transportation, packaging, warehousing, storage, exporting, licensure, joint ventures, ownership documentation, terms of trading, organization, financial and management skills.

### **BUINB-567 International Management (3 cr.)**

Theory and practice of managing international organizations, including sociocultural aspects and group dynamics of international businesses and service organizations.

### **BUINB-685 International Marketing (3 cr.)**

Fall and Spring

Principles and policies of marketing goods and services in international markets. Concepts, strategies and policies of world trade and multinational firms.

### **BUINB-688 International Business Practicum (3 cr.)**

Fall and Spring

Assist an actual business in developing their international marketing plan. Students, under the supervision of a faculty member, determine a product's foreign marketability.

Prerequisites: take BUINB-685.

### **BUINB-689 International Business Policies (3 cr.)**

Fall and Spring

Students develop the ability to solve business problems in the international arena using a scientific approach to decision making by studying business cases on international policy formulation and administration, manufacturing, marketing, finance, accounting, personnel and public relations functions.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: February 2007



## **BULGL Business Legal**

### **BULGL-546 Seminar** (1-3 cr.)

Current topics in business. (Title will reflect specific business content.) **R**

### **BULGL-601 Legal Environment of Business** (2 cr.)

Fall and Spring

Changing relationship of government and industry: regulatory legislation, administrative agencies, national policies and social control.

### **BULGL-673 Legal Aspects of Construction** (3 cr.)

Fall

Analysis of contracts and documents used in building construction industry: rights of the parties. Labor relations: law and labor, legality of strikes, legality of picketing and boycott as economic pressure, unfair labor practices, employer and union, rights and responsibilities of supervisor and worker.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Reviewed: February 2007

## **BUMGT Business Management**

### **BUMGT-546 Seminar (1-3 cr.)**

Fall, Spring and Summer

Current topics in business. (Title will reflect specific business content.) **R**

### **BUMGT-680 Entrepreneurship: Small Business Planning (3 cr.)**

Fall and Spring

Concepts, strategies, and applications involved in entrepreneurship. Profile of entrepreneurs and the risks and rewards, creating products and services for the market place, going into business --start-up, buy out, franchise— legal and financial aspects. Preparing a business plan required.

Prerequisites: take BUMKG-330, BUACT-206 or BUACT-200.

### **BUMGT-690 Strategic Management and Business Policy (3 cr.)**

Fall and Spring

Integrates previous business studies, develops ability to solve business problems through scientific approaches to decision-making. Students use business cases on policy formulation and administration: manufacturing, marketing, finance, accounting, personnel, and public relations functions.

### **BUMGT-760 Strategic Planning and Deployment (2 cr.)**

Fall and Spring

Introduction to corporate planning, strategy and policy. Orientation to generalized planning process and the outputs of planning system. A discussion of planning decision sub-system, strategic information sub-system, planning organizational sub-system and planning management sub-system. Instructor's consent required.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: July 2007

## **BUMIS Business Management Information Systems**

### **BUMIS-546 Seminar**(1-3 cr.)

Current topics in business. (Title will reflect specific business content.) **R**

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**Back to [Course Descriptions](#)**

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The Graduate Bulletin  
Reviewed: February 2007

## **BUMKG Business Marketing**

### **BUMKG-508 Marketing for Non-Profit Organizations** (2 cr.)

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Strategic marketing planning process, marketing audit, marketing strategy development, positioning concept, market research, marketing mix, communication strategies and ethical issues for non-profit organizations. Sophomore level or higher.

### **BUMKG-537 Procurement, Sourcing and Supply Chain Management** (3 cr.)

Fall and Spring

Processes used in procuring goods and services; analyzing and selecting global sources of supply; economics of total cost of ownership; importance of quality, delivery, ethics, and legal aspects of supplier management; negotiation principles. Recommended: proficiency with spreadsheet software.

### **BUMKG-546 Seminar** (1-3 cr.)

Current topics in business marketing. (Title will reflect specific content.) **R**

### **BUMKG-550 E-Business Strategy and Practice** (3 cr.)

Fall and Spring

Development and growth of Internet marketing. An examination of e-business basics, business models, current and future trends, major issues, evaluation of model design and Internet marketing plans.

### **BUMKG-585 Target Marketing** 3 cr.

The study and application of methods used to identify viable market segments; use of demographic, psychographic and cultural research findings to successfully market products and services to various market segments.

### **BUMKG-638 Principles of Logistics** (3 cr.)

Fall and Spring

Applies systems approach to plan movement and storage of raw materials, components and finished goods from point of origin to point of consumption. Focuses on transportation and warehousing decisions, channel structures, physical distribution, materials management, and supply chain concepts.

### **BUMKG-639 Seminar: Supply Chain Systems Design** (3 cr.)

Spring

Synthesizing experience in supply chain, cases, problems and team/individual research will focus on analyzing, designing and modeling cost effective supply chain systems that utilize innovative technology and business practices for procuring, manufacturing, storing, and moving goods from suppliers, manufacturers, distributors, retailers and end customer.

### **BUMKG-679 Marketing Research** (3 cr.)

Fall and Spring

Experimental and survey techniques to secure information for successful marketing;

primary and secondary sources; data collection, compilation and analysis methods; effective communication of conclusions and recommendations to management. First-level statistics required.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: August 2006

## **BURTL Business Retail**

### **BURTL-519 International Economic Trends in Textiles and Clothing** (3 cr.)

Fall and Spring

Economic importance of the textile and apparel industries in the United States and the world.

### **BURTL-522 Merchandising and Marketing an Apparel Line** (2 cr.)

Spring

Merchandising and marketing of product lines from manufacturer to retailer to consumer.

### **BURTL-527 Store Management** (3 cr.)

Fall and Spring

Develop management skills for retail stores of varying size.

### **BURTL-535 Special Topics in Retail Merchandising and Management** (1-3 cr.)

Fall, Spring and Summer **R**

### **BURTL-550 Marketing to Aging and Minority Consumers** (2 cr.)

Fall

Identify product and service needs of Native, African, Asian and Hispanic Americans, and aging consumers. Interpret demographic, psychological and cultural data of these special populations and develop merchandising strategies. Prerequisites: take BUMKG-330.

### **BURTL-617 Social/Psychological Aspects of Clothing** (3 cr.)

Fall and Spring

Social and psychological influence of dress on individual and group behavior patterns.

### **BURTL-619 National Study Tour to Fashion Industry** (1 cr.)

Fall and Spring

Five-day visit to New York or alternate city: study hours, discussions and lectures by leaders in American fashion market. Equivalent to APRL-619. **R**

### **BURTL-625 Current Retail Strategies for a Differential Advantage** (2 cr.)

Fall and Spring

Comparative analysis of specific retail corporations' strategies to gain a differential advantage with their merchandising and operational methodology.

### **BURTL-626 Fashion Retailing Practicum** (4 cr.)

Fall, Spring and Summer

Observation and structured experience in merchandising procedures dealing with complete operations and management of retail establishment.



**BURTL-690 Advanced Merchandise Planning Control (3 cr.)**

Fall and Spring

Application of merchandise theory and techniques to budget, manage, and adjust actual purchases, inventory, and sales of an actual retail business.

**BURTL-735 Problems in Textiles, Clothing and Retail Marketing (2 cr.)**

Fall, Spring and Summer

Identification, selection and completion of a problem in textiles, clothing, and retail marketing culminating in a Plan B paper. Equivalent to APRL-735 Prerequisites: take EDUC-740. \$

**BURTL-770 Thesis -- Textiles, Clothing and Retail Marketing (2-6 cr.)**

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Consent of Program Director. Equivalent to APRL-770. Prerequisites: take EDUC-740. \$

**BURTL-790 Seminar in Textiles, Clothing and Retail Marketing (2 cr.)**

Review, evaluation and interpretation of current research in textiles, clothing and retail marketing. Equivalent to APRL-790.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: December 2008

## **CADD CADD/Drafting**

### **CADD-595 Seminar 1-2 cr.**

(Title will reflect specific design, research and development content.) Current and projected communication methods, concepts, technologies and innovations in design, research and development. R

### **CADD-600 Workshop: 1-3 cr.**

Special topics in design, research and development, providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop. R

### **CADD-636 Computer Assisted Design Problems 3 cr.**

Advanced CADD applications. Construct three dimensional wireframe drawings. Perform finite element analysis on select components. Customize software for specific applications. Customize software for specific applications. In-depth analysis of CADD applications in mechanical and architectural design.

### **CADD-666 3-D Computer Modeling and Rendering 3 cr.**

Development of three-dimensional computer models and computer graphic images. Includes 3-D surface modeling and rendering.

### **CADD-792 Special Projects in Drafting/Product Design 2-6 cr.**

Substantive study and activity for specialists in the design, research and development field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant in design, research and development. Preparation of a technical report may be repeated for a maximum of six semester credits. R

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**Back to [Course Descriptions](#)**

---

Revised: July 2008

## **CHEM Chemistry**

### **CHEM-501 Physical Chemistry Lecture 3 cr.**

Fall and Spring

Fundamental physical chemistry; behavior of gases, liquid state, properties of solutions, principles of thermodynamics, thermochemistry. Taken concurrently with CHEM-503.

Recommended: CHEM-531.

### **CHEM-503 Physical Chemistry Laboratory 1 cr.**

Lab course to be taken concurrently with CHEM-501. Experimental techniques and apparatus; treatment of experimental data. Recommended: CHEM-531.

### **CHEM-511 Biochemistry 4 cr.**

Fall and Spring

Fundamental chemistry and metabolism of carbohydrates, lipids and proteins; second- and third-order structure of proteins; chemistry of nucleic acids; nature and dynamics of enzymes and enzyme action; biological oxidations; lab work in metabolism, chromatography, enzyme action, qualitative and quantitative analytical procedures.

### **CHEM-515 Food Chemistry 3 cr.**

Spring

Organic biochemistry of foods: enzymatic and non-enzymatic changes associated with food preparation and storage (Maillard-Browning reaction), denaturation of protein, changes in color, odor, texture and nutritive value. Techniques for isolation and identification of biochemical constituents of foods.

### **CHEM-531 Quantitative Analysis 3 cr.**

Fall

Introduction to the principles of quantitative chemical analysis and training in precision laboratory techniques.

### **CHEM-535 Instrumental Methods of Analysis 3 cr.**

Spring

Application of instrumental methods to chemical analysis: electrochemical, spectrophotometric, chromatographic, and thermal analysis. Techniques for methods development, sample preparation, optimization of operating conditions, and data analysis needed to obtain accurate, reproducible results by means of instrumentation.

### **CHEM-541 Chemistry of Materials 4 cr.**

Fall and Spring

Relationship of the chemistry and microstructure of structural materials (metals, polymers

and ceramics) to their properties; degradation of those materials, corrosion of metals, polymers and ceramics.

**CHEM-553 Environmental Chemistry 3 cr.**

Fall and Spring

Principles and origins of chemical reactions that lead to ecological imbalance; systems that have contributed to large-scale environmental pollution or are of current importance; chemical technology needed to correct imbalance.

**CHEM-612 Advanced Biochemistry 3 cr.**

Fall and Spring

Molecular biology of humans and other organisms; biosynthesis and catabolism, emphasizing enzyme action; chemistry of specific tissues and fluids.

**CHEM-652 Environmental Regulations Management 3 cr.**

Fall, Spring and Summer

Laws governing environmental issues. Environmental regulations, applicability of the laws, and resources for interpreting the regulations. Evaluation of environmental research. Consent of instructor required.

**CHEM-710 Industrial Hygiene Instrumentation 2 cr.**

Fall, Spring and Summer

Work place environment analysis by direct reading and integrated sampling techniques.

**CHEM-742 Industrial Hygiene 3 cr.**

Principles and techniques for recognizing, evaluating and controlling existing or potential occupational health hazards that affect employee safety and health.

**CHEM-762 Industrial Hygiene Ventilation and Noise Control 3 cr.**

Spring

Evaluation and testing of contaminant control ventilation systems for removal of toxic gases, vapors, and particulates from work environments. Evaluation of noise exposures and application of noise control methods to reduce worker exposures. \$

**CHEM-770 Thesis - Industrial Hygiene 2-6 cr.**

Independent research under direction of investigation advisor. Selection of problem, review of literature, planning and conducting research, interpretation of findings, and preparation of final paper according to thesis standards. Students may enroll for two, four or six semester hours of credit in various terms for a final total of six. Consent of program director. Prerequisites: take EDUC-740 or INMGT-700. R

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Back to [Course Descriptions](#)

---

Revised: May 2009

## **CNS Cognitive Neuroscience**

### **CNS-681 Mathematics and the Brain (4 cr.)**

Basic principles of computational cognitive neuroscience. Simulating cognition using biologically based networks of neuron-like units (neural networks).

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Reviewed: January 2009



## **COUN Counseling**

### **COUN-600 Workshop in Counseling 1-3 cr.**

Current specialized topics studied through experiential activities. **R**

### **COUN-606 Peer Supervisory Experience 1 cr.**

Fall and Spring

Experience in observation and feedback to peers undergoing counseling skill training. Instructor's consent required. **R**

### **COUN-647 Assessment and Treatment of Eating Disorders 2 cr.**

Summer

Description and diagnostic criteria for anorexia nervosa, bulimia nervosa, obesity, and compulsive overeating. Psychological, sociological, and familial influences on the development of the disorders. Assessment instruments, approaches, and treatment considerations.

### **COUN-694 Counseling Older Persons 2-3 cr.**

Spring Semester

Training service providers in counseling skills and gerontology through discussion, observation and supervised counseling experiences.

### **COUN-700 Seminar in Counseling 1-3 cr.**

Special topics on current developments in the field. Each seminar is devoted to a specific development to be indicated with a subtitle and description. **R**

### **COUN-715 Orientation To Mental Health Counseling 3 cr.**

Fall Semester

Professional, ethical, and legal issues in mental health and AODA counseling. National and Wisconsin credential standards for mental health and AODA counseling practice. Regional mental health and AODA practice settings. Public policy issues in mental health and AODA counseling. .

### **COUN-720 Psychopharmacology 2 cr.**

Summer Session

Overview of abused street and prescription drugs and the legitimate use of psychopharmaceutical medicine. Fundamental concepts of neuroanatomy and neurochemistry. Medications for the treatment of substance abuse disorders and chronic pain management. Signs and symptoms of drug toxicity, drug interactions and side effects. Crisis intervention strategies.

### **COUN-721 Alcohol and Drug Abuse Treatment Programs 3 cr.**

Spring Semester

Psychological factors in alcohol and drug abuse. Treatment programs and approaches used by alcohol and drug abuse counselors.

### **COUN-722 Advanced Topics in Compulsive Behavior Disorders 3 cr.**

Fall

Psychology of shame and its relationship to substance abuse and other compulsive behaviors. Overview of prominent topics in compulsive behavioral disorders including

substance abuse, gambling, eating, spending money, sex, internet, and other excessive and harmful behaviors. Advanced counseling skill development through psycho-education presentations and hypothetical problem solving. Ethical issues in counseling.

Prerequisites: take COUN-721.

**COUN-723 Psychopathology: Assessment and Treatment Planning 3 cr.**

Fall Semester

Training in the use of the current edition of the diagnostic and statistical manual DSM for assessment of mental disorders; use of behavioral and psychometric assessment procedures; treatment planning.

**COUN-725 Social and Cultural Issues in Counseling 3 cr.**

Spring Semester

Major concepts, theoretical perspectives, professional issues, and skills of effective counseling related to such factors as culture, ethnicity, nationality, age, gender, sexual orientation, mental and physical characteristics, education, family values, religious and spiritual values, and socio-economic status.

**COUN-727 Mindfulness Applications in Counseling 2 cr.**

History and methods of mindfulness psychology. Research supporting mindfulness integration in counseling. Theories and techniques of current mindfulness-based counseling and psychotherapy. Experiential mindfulness exercises and practice.

**COUN-735 Problems in Counseling 2 cr.**

Plan B investigations are the primary purpose of this course. Students who are ready to write their Plan B paper should register for this course and then confer with the major adviser to select a staff member who will serve as an investigation adviser. Meetings with the adviser are by arrangement only. Prerequisites: take EDUC-740 or MFT-765. \$

**COUN-745 Treating Personality Disorders 1 cr.**

Summer Session

Diagnosis, assessment, and treatment of personality disorders as defined in the current edition of the Diagnostic and Statistical Manual DSM. Underlying belief systems associated with the various personality disorders. Therapeutic strategies useful in working with individuals with personality disorders.

Prerequisites: take COUN-723.

**COUN-750 Counseling Theory 3 cr.**

Fall, Spring and Summer Semesters

History and theories of counseling and psycho- therapy: psychoanalytic, humanistic/existential, cognitive/behavioral, family systems, feminist, and others. Underlying personality theory. Integration and eclecticism in counseling practice. Illustrative practical applications. Integration of counseling theory into a personal counseling style.

**COUN-752 Group Dynamics 3 cr.**

Fall, Spring and Summer Semesters

Theoretical and experiential understandings of group work, dynamics/development, and leadership approaches. Small group experience and supervised training in essential group leadership skills. Design and implementation of different types of groups for diverse populations in varied professional settings. May take concurrent w/COUN788 with Instructor's Approval.

Prerequisites: take COUN-788.

**COUN-754 Assessment and Clinical Interviewing in Counseling 1 cr.**

Instruments and procedures used for the assessment of behavior relevant to and appropriate for mental health counseling. Emphasis on the selection, interpretation, and application of major assessment instruments and procedures. Synthesis of assessment information into psychological reports.

Prerequisites: take SPSY-753.

**COUN-761 Counseling Children and Adolescents 3 cr.**

Spring Semester

Concepts and developmental approaches to counseling with children and adolescents. Integration of culturally responsive strategies, identification of at-risk behavior and prevention, and strategies to work with parents and families.

**COUN-770 Thesis 2-6 cr.**

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of six. Consent of Program Director.

Prerequisites: take EDUC-740 or MFT-765. **R \$**

**COUN-775 Alcohol and Drug Abuse Counseling Practicum I 8 cr.**

Fall Semester

Counseling under supervision in an alcohol and drug abuse treatment facility. Laboratory instruction on various aspects of alcohol and drug abuse treatment approaches.

Prerequisites: take COUN-721 and COUN-788.

**COUN-776 Alcohol and Drug Abuse Counseling Practicum II 8 cr.**

Spring Semester

A continuation of Alcohol and Drug Abuse Counseling Practicum I. Students will continue a supervised counseling experience in an appropriate treatment facility and related laboratory instruction. Prerequisites: take COUN-775.

**COUN-788 Counseling Process Laboratory 3 cr.**

Fall, Spring and Summer Semester

Basic attending and influencing skills used in the one-to-one and one-to-group situations involving laboratory experiences, such as counseling, feedback, critiquing, modeling, assessing and evaluating.

Prerequisites or Corequisite: COUN-750

**COUN-789 Cognitive-Behavioral Therapy: Principles And Application 3 cr.**

Fall and Spring Semesters

Training in the theory and practice of cognitive- behavioral, and solution-focused treatment models. Assessment, intervention, and self-management strategies through this approach will be emphasized. Application of cognitive-behavioral techniques to human problems.

Prerequisites: take COUN-750.

**COUN-793 Mental Health Counseling Practicum 3 cr.**

Fall and Spring Semesters

Minimum of 150 hours of closely supervised counseling experience in an appropriate mental health setting. Regular seminars and individual supervision sessions required.

Prerequisites: take COUN-788

**COUN-794 Mental Health Counseling Internship 2-6 cr.**

Fall, Spring and Summer Semesters

Minimum of 200 hours of supervised experience in a mental health or AODA setting for 2 credits. Applied professional experiences, including individual, group, marriage and/or family counseling; intake interviewing; diagnosis; psychological testing; treatment planning; consultation/outreach; referrals; and/or documentation.

Prerequisites: take COUN-793. **R**

**COUN-892 Advanced Counseling Practicum 2 cr.**

Clinical supervised counseling experiences in a variety of school institutional and agency settings. Designed to assist the student to more adequately understand and apply the dynamics of human behavior in the one-to-one counseling relationship. A minimum of 60 to 90 clock hours of experience is required. Prerequisites: take COUN-797. **R**

**COUN-895 Field Study 2-6 cr.**

Experience in action-type field research in pupil personnel services. The student will identify and research a topic directly related to his career position. Preparation and presentation of a formal report of the study to appropriate personnel. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of six. **R \$**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: January 2007

## CS Computer Science

### **CS-545 Image Processing** (3 cr.)

Spring

Theory and applications of digital image processing. Mathematical foundations and algorithms for enhancement, restoration, compression, segmentation and reconstruction from projections.

### **CS-546 Simulation Modeling and Analysis** (3 cr.)

Fall and Spring

Simulation as a problem-solving technique; models, analysis and languages for simulation; data collection; random variate generation; verification and validation; output analysis; optimization of systems.

### **CS-741 Computer Programming Techniques** (2 cr.)

Fall, Spring and Summer

Introduction to computer systems and their utilization. Emphasis on translating language with application to individual research projects, statistical or developmental. (Not available to students who have completed CS-141.)

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Reviewed: February 2007

## **CSTEM College of Science, Technology, Engineering and Mathematics**

### **CSTEM-590 Technical Service Schools (.5-6 cr.)**

Some special-purpose technical courses offered by manufacturers are suitable for college credit. Guidelines: 1) Student makes all arrangements with manufacturer offering courses; 2) One credit is awarded for each full week (40 hours) of attendance; 3) Student enrolls and pays fees prior to taking course; 4) Approval of dean of College of Science, Technology, Engineering and Mathematics needed before enrolling for credit; 5) Graduate School approval required for students taking courses for graduate credit. **R**

### **CSTEM-701 Lean Seminar I: Principles of Lean Manufacturing (.5 cr)**

Introduces a systematic approach to eliminating waste in manufacturing processes by use of the 5S approach to organization, reducing batch sizes, utilizing point of use storage, using pull systems, implementing cellular/flow, implementing quality at the source, and involving employees. Includes live simulations.

### **CSTEM-702 Lean Seminar II: Value Stream Mapping Manufacturing (.5 cr)**

Value Stream Mapping (VSM) is a method to visually depict material and information flow through an industrial operation. Principles and techniques of the VSM process, mapping the current state of a sample company, applying Lean concepts to develop an improved future state, and identifying steps needed to achieve that state.

Prerequisites: take CSTEM-701.

### **CSTEM-703 Lean Seminar III: Principles of Cellular/Flow Manufacturing (.5 cr)**

Use of Cellular/Flow Manufacturing in linking manual and machine operations into the most efficient combination of resources to maximize value added content, ensuring continuous product flows, and meeting customer demands, while minimizing waste.

Prerequisites: take CSTEM-701.

### **CSTEM-704 Lean Seminar IV: The 5S System (.5 cr)**

Use of the principles of 5S system of manufacturing improvements (sort, set in order, shine, standardize, sustain) to develop a visual workplace that is organized, clean, and standardized and contains only what is required, enhancing the organization's communication and productivity.

Prerequisites: take CSTEM-701.

### **CSTEM-705 Lean Seminar V: Quick Changeover/Setup Reduction (.5 cr)**

The principles of the Single Minute Exchange of Dies (SMED) system, a four-step changeover improvement process, are used to present techniques of designing no-cost/low-cost solutions to dramatically reduce or eliminate changeover time.

Prerequisites: take CSTEM-701.

**CSTEM-706 Lean Seminar VI: Total Productive Maintenance** (.5 cr)

Use of the Total Productive Maintenance (TPM) system of maximizing manufacturing equipment productivity. Utilization of Overall Equipment Effectiveness (OEE) to determine effective capacity of equipment. Development of effective, preventive, and predictive maintenance tools to reduce machine downtime and achieve autonomous maintenance.

Prerequisites: take CSTEM-701.

**CSTEM-707 Lean Seminar VII: VSM/Project Planning** (.5 cr)

The roles and expectations of a Value Stream Manager and the formation and leadership of a team to drive change in the organization. Individual project plans for Lean implementation projects are initiated.

Prerequisites: take CSTEM-701, CSTEM-702, CSTEM-703, CSTEM-704, CSTEM-705, and CSTEM-706.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: August 2009



## CTE Career and Technical Education

### **CTE-501 Preservice Workshop For Career and Technical Educators 1 cr.**

Introduction to the basic concepts of teaching courses in Wisconsin career, technical, and adult education.

### **CTE-502 Principles of Career and Technical Education 2 cr.**

Fall, Spring and Summer Semesters

Philosophy, organization and administration of career, technical and adult education, nationwide, in Wisconsin, and on the local level.

### **CTE-510 Foundations of Health Sciences Occupations Education 3 cr.**

The philosophy, organization and administration of health science occupations education at the national, state and local level; includes current topics in health science occupations education with application for personnel in the field.

### **CTE-520 Careers in Health Care 3 cr.**

Investigation of health care delivery system, services, occupations, and related health services, and the health sciences career clusters. Bachelor's degree required.

### **CTE-530 Curriculum Planning in Health Science Occupations 3 cr.**

Competency-based and individualized approaches to principles of curriculum and course construction, study of curriculum terminology, methods of selecting and organizing content for

health science occupations educators. Prerequisites: take CTE-510, CTE-520.

### **CTE-534 Performance Analysis 3 cr.**

Analysis techniques utilized in curriculum development. Emphasis on task analysis and related procedures. Includes occupational and needs analysis, competency identification, objective writing and information mapping. Integrates task analysis with a total system for developing and revising vocational curriculum or job training programs.

### **CTE-537 Competency-Based Education, Career and Technical 2 cr.**

Fall and Spring Semesters

Competencies for career, technical and adult education programs and courses.

Development of competency-based education performance indicators in all domains, a competency-based education management system, and basis for competency-based education evaluation.

### **CTE-546 Seminar 1-3 cr.**

Fall, Spring and Summer Semesters

Current topics in career, technical and adult education with application for personnel in the field. Instructor's consent required.

### **CTE-559 Technology Impacts Occupational Programs 4 cr.**

Summer Session

Presentation of latest technology in communications, manufacturing, construction, and/or transportation which involve concepts from math, science and computer science. **R**

**CTE-560 Cooperative Occupational Education Programs 2 cr.**

Spring and Summer Semesters

Philosophy, organization, coordination and teaching techniques or cooperative education programs in the various career and technical areas. Roles, responsibilities, duties of the cooperative teacher coordinator.

**CTE-575 Workshop 1-3 cr.**

Fall, Spring and Summer

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

**CTE-598 Field Experience 1-2 cr.**

**CTE-605 Methods of Teaching Career and Technical Education 2 cr.**

Fall and Summer Semesters

Competency-based and individualized approach to methods of teaching career and technical education.

**CTE-638 Course Construction For Career and Technical Educators 2 cr.**

Fall and Summer Semesters

Competency-based and individualized approach to principles of course construction for career and technical educators.

**CTE-640 Instructional Evaluation in Career and Technical Education 2 cr.**

Spring and Summer Semesters

Competency-based and individualized approach to instructional evaluation for career and technical educators.

**CTE-674 Adult Education 2 cr.**

Fall Semester

Philosophy and history of adult education in the United States. Techniques for teaching adults: psychological factors, methods, adult interests and characteristics.

**CTE-708 Issues in Career and Technical Education 2 cr.**

Summer Session

An in-depth study of contemporary issues affecting career, technical and adult education. Possible solutions or alternatives will be proposed.

**CTE-710 Coordination and Supervision of Career and Technical Education 2 cr.**

Fall, Spring and Summer Semesters

Principles of coordination/supervision in career, technical and adult education. The coordinator/supervisory positions and their functional relationship to the career and technical education system.

**CTE-735 Problems in Career and Technical Education 2 cr.**

Identification, selection, and completion of a problem in career and technical education culminating in a Plan B paper. Prerequisites: take EDUC-740. \$

**CTE-737 Competency-Based Education -- Career and Technical 2 cr.**

Fall

Competencies for career, technical and adult education programs and courses. Development of competency-based education performance indicators in all domains, a competency-based education management system, and basis for competency-based education evaluation.

**CTE-746 Seminar 1-3 cr.**

Special topics on current developments in the field. Each seminar devoted to a specific development to be indicated with sub-title and description.

**CTE-770 Thesis--Career and Technical Education 2-6 cr.**

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of six. Consent of Program Director. Prerequisites: take EDUC-740.  
\$

**CTE-775 Workshop R 1-3 cr.**

Special topics providing hands-on experiential learning activities. Specific content and title to reflect the topic of the workshop.

**CTE-780 Internship, Career and Technical Education 4-8 cr.**

Fall and Spring Semesters

A planned, supervised experience for M.S. or Ed.S. candidates. To be completed at selected locations capable of providing appropriate experiences. Consent of Program Director.

**CTE-784 Internship -- Local Vocational Education Coordinator 4-8 cr.**

Fall and Spring Semesters

Supervised field practice in local career and technical education coordination to be completed at selected schools or CESA agencies capable of providing appropriate experiences. Consent of Program Director.

**CTE-792 Administration, Career and Technical Education 2 cr.**

Career, technical and adult school operation, legal status, policy making staff personnel, student personnel, programs, public relations, physical plant, business management. Prerequisites: take CTE-710.

**CTE-797 Field Experience 1 cr.**

**CTE-798 Field Experience 1-2 cr.**

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: February 2007

## **ECE Early Childhood Education**

### **ECE-564 Observing and Guiding Children: Early Childhood Classrooms (3 cr.)**

Fall and Spring

Essential elements in guiding children in early childhood classrooms. Positive guidance strategies, introduction to early childhood classroom management, effects of guidance on children's social and emotional development, developing an eclectic approach. Power, process, ethics, methods of observing, documenting children's behavior, progress, development. Observation and participation in early childhood classrooms required.

### **ECE-613 Lang Arts/Reading I: Birth-Kindergarten (3 cr.)**

Fall, Spring and Summer

Developmentally appropriate strategies and materials for planning, implementing, and evaluating language arts. Emphasis on developing emergent literacy skills and language arts with children Birth through Kindergarten.

### **ECE-621 Administration of Early Childhood Programs (2 cr.)**

Fall

A study of program organization, program design, staffing, licensing, certification, equipment and facilities for operating early childhood education programs. Field trips required.

### **ECE-626 Advanced Classroom Management and Guidance (3 cr.)**

Fall and Spring

Advanced study of managing early childhood classrooms. Management of the physical environment, instructional context, including large and small groups, and social context. Building a classroom community and encouraging collaborative learning. Assessing management of early childhood classrooms. Analysis of classroom management programs. Observation/participation in early childhood classrooms required. Prerequisites: take ECE-564.

### **ECE-627 Child Abuse and Neglect (2 cr.)**

Fall

Systemic nature, forms and indicators, and prevention of abuse/neglect. Factors contributing to, and intervention skills in, coping with the effects of abuse/neglect on children and families at risk.

### **ECE-635 Children, Families, Schools and Communities (3 cr.)**

Fall, Spring and Summer

Building family, school, and community partnerships to support children's wellbeing and educational success. Theories and processes used to establish positive home-school-community relations.

### **ECE-664 Special Topics in Early Childhood Curriculum (1-3 cr.)**

Philosophy and methodology of early childhood education: problems confronting teachers.

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### **ECE-766 Trends in Early Childhood Education** (3 cr.)

Overview of trends in early childhood education with emphasis on problems confronting teachers in establishing early childhood programs in communities and schools.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: February 2007

## **EDUC Education**

### **EDUC-504 Secondary Curriculum Methods and Assessment 2 cr.**

Discipline-specific curriculum, methods, and assessment procedures for teaching content minors. Completion of Benchmark II.

### **EDUC-507 Applied Human Relations 2 cr.**

Fall, Spring and Summer

An experiential course focusing on major themes affecting human relations.

### **EDUC-536 Multiculturalism: Issues and Perspectives 2 cr.**

Fall, Spring and Summer

Intensive study of diversity in U.S. schools. Examination of the educational needs of students from various ethnic, cultural, religious, language and social class groups.

Discussion of issues related to racism, sexism and oppression.

### **EDUC-576 Cross-Cultural Field Experience 1 cr.**

Fall, Spring and Summer

Supervised field experience in an educational setting with diverse learners to increase awareness, understanding, sensitivity, and appreciation for ethnic and cultural diversity. The acquisition of knowledge, skills, and professional dispositions necessary for educators to facilitate learning for all students are emphasized.

### **EDUC-580 Reading and Language Arts in Elementary Education 3 cr.**

Fall, Spring and Summer

Current philosophies in reading and language arts education, the centrality of language arts to the elementary curriculum and methodologies for the elementary classroom.

### **EDUC-581 Preclinical: Elementary Education Language Arts and Reading 1 cr.**

Fall, Spring and Summer

Supervised teaching experience in developing the prospective teacher's ability in elementary education language arts and reading skills. Prerequisites: take EDUC-580.

### **EDUC-582 Secondary Reading and Language Development 2 cr.**

Fall, Spring and Summer

Effective utilization of reading and language development methodologies in secondary content area classrooms.

### **EDUC-600 Workshop: Special Topics in Education 1-3 cr. R**

### **EDUC-601 Global Education Practicum 3 cr.**

Summer

Experiential learning opportunity to provide student with in-depth study of one or more of the global education sub-groups: human rights and social justice, human commonality and diversity, population demographics, planet management, global belief systems, economic systems, conflict and control, political systems, science and technology and/or sustainable

development.

**EDUC-602 Global Perspectives for Educators 3 cr.**

Fall and Spring

Strategies for infusing global perspectives into the classroom for those working in globalized organizations. Methodology, materials and instructional strategies necessary for effective implementation of global education in schools and individual classrooms as well as within global organizations. Topics/issues related to globalization to develop a foundation from which teachers and other leaders in organizations can draw ideas for their specific needs.

**EDUC-603 Educational Psychology of the Adult Learner 2 cr.**

Spring and Summer

.Psychological principles and theoretical framework guiding the educational process for adult learners. Special focus on planning and evaluating instruction while utilizing active learning to build strong learning communities.

**EDUC-615 Classroom Management 2-3 cr.**

Technique and theory for motivating Pre-K through grade 12 age students to manage their own behaviors, including preventive discipline, behavior management, classroom environment, classroom climate, effective communication, conflict resolution, and peer mediation.

**EDUC-616 Conflict Resolution and Crisis Management for Educators 2 cr.**

Conflict mediation and crisis intervention strategies in school settings.

**EDUC-630 Ojibwe Lifeways 2-4 cr.**

Summer

In depth, interactive study of Ojibwe culture within a Wisconsin reservation community. \$

**EDUC-709 Middle Childhood Education 2 cr.**

Developmental expectations, management and consultation strategies, and appropriate dispositions for teaching children ages 9 through 11. Instructor's consent required.

**EDUC-710 Middle Childhood: Teaching Science 2 cr.**

Curriculum, methods and assessment in middle childhood science teaching for children ages 9 through 11. Knowledge and performance in planning, classroom management, instruction, and professional responsibilities of reflection and communication. Instructor's consent required.

**EDUC-711 Middle Childhood: Teaching Mathematics 2 cr.**

Curriculum, methods and assessment in middle childhood mathematics teaching for children ages 9 through 11. Knowledge and performance in planning, classroom management, instruction, and professional responsibilities of reflection and communication. Instructor's consent required.

**EDUC-712 Middle Childhood: Teaching Social Studies 2 cr.**

Curriculum, methods and assessment in middle childhood social studies teaching for children ages 9 through 11. Knowledge and performances in planning, classroom management, instruction, and professional responsibilities of reflection and communication. Instructor's consent required.

**EDUC-713 Middle Childhood: Teaching Reading/ Language Arts 2 cr.**

Curriculum, methods and assessment in middle childhood reading/language arts teaching for children ages 9 through 11. Knowledge and performance in planning, classroom management, instruction and professional responsibilities of reflection and communication. Instructor's consent required.

**EDUC-726 Administration 2-3 cr.**

Philosophy and principles underlying organization and operation of public education on the local, state and national levels in the United States. Examinations of prevailing practices and current problems of school management.

**EDUC-727 Supervision of Student Teachers 2 cr.**

Fall, Spring and Summer

Online, interactive course that examines the role of the cooperating school and teacher in orienting, guiding and assessing student/intern teachers.

**EDUC-729 Introduction to Educational Research 1 cr.**

Fall, Spring and Summer

Overview of educational research; identification of research topics and development of a research proposal.

**EDUC-735 Problems in Education 2 cr.**

Fall, Spring and Summer

Identification, selection and completion of a research problem in education culminating in a Plan B research paper. Consent of Program Director. Prerequisites: take EDUC-740, EDUC-741, or EDUC-742. \$

**EDUC-740 Research Foundations 4 cr.**

Fall, Spring and Summer

This course serves as an introduction to basic concepts and principles in educational research. The course utilizes mastery grading and elements of individualized instruction. The course functions to help prepare the student for his own graduate research experiences and also to prepare him to be an articulate consumer of research upon completion of the course.

**EDUC-741 Education Grant Proposal Development 3 cr.**

Principles of grant proposal writing to support educational research needs. Prerequisites: take EDUC-729 or TECED-739.

**EDUC-742 Program Evaluation 3 cr.**

Surveys theory and practice of evaluating the effectiveness of a variety of human-service delivering systems, including education. Develops applied competencies in analyzing values and needs of decision makers and articulation and assessment of program objectives both process and product). Emphasis on building efficient, ongoing evaluation systems. Equivalent to 421-742.

**EDUC-744 Seminars in Education 1-3 cr.**

Examination of issues concerning contemporary education with an emphasis on confronting teachers working in the schools. R

**EDUC-750 Curriculum Theory and Practice 2-3 cr.**

Fall, Spring and Summer



A study of curriculum theory and its application. An analysis and development of a rationale, writing educational objectives, identifying a body of knowledge, specifying methodology, and conducting curriculum evaluation.

**EDUC-760 E-Learning for Educators 3 cr.**

Historical background and current trends in online learning. Concepts and foundations of best practices for successful teaching online. E-learning theory, principles, learning management systems, and web-based technology tools.

**EDUC-761 Creating Collaborative Communities in E-Learning 3 cr.**

Concepts, methods and research for creating and facilitating a collaborative online community of practice. Dynamics of facilitated synchronous and asynchronous discussion, questioning skills, conflict resolution, netiquette, and collaborative learning through problem-based scenarios, simulations, and hands-on practice moderating online discussions.

**EDUC-762 Assessment in E-Learning 3 cr.**

Performance-based assessment. Summative and formative feedback methods to assess student learning in the online classroom. Best practices for grading procedures, prevention of plagiarism in the digital environment, electronic evaluation tools, using electronic record-keeping systems and methods for evaluating e-portfolios, posted discussions, and group projects.

**EDUC-763 Instructional Design For E-Learning 3 cr.**

Evaluation, discussion and application of instructional design theories and principles for online learning. Examination of hybrid, self-paced and facilitated online learning experiences delivered via course management systems. Scenario-based simulations and case study analysis. Creating interactive multimedia learning objects. Application of accessibility and usability guidelines in web-based course design.

**EDUC-764 E-Learning Practicum 3 cr.**

Practicum in teaching online with a cooperating online instructor. Application of online pedagogy and technology evaluated through observation, discussion and reflections. Completion of a professional development plan and an e-portfolio of evidence of attainment of online learning standards. Instructor's consent required.  
Prerequisites: take EDUC-760, EDUC-761, EDUC-762, and EDUC-763.

**EDUC-765 Trends and Issues in Instructional Design 3 cr.**

In-depth comparison of current instructional design theories and models, principles of adult learning, variables that affect adult learning, techniques for stimulating and sustaining learner motivation, reinforcement of learning, skill transfer, and use of cognitive task analysis to determine instructional content.

**EDUC-766 Instructional Strategies and Assessment Methods 3 cr.**

Development of instructional goals, objectives and assessment of outcomes. Methods for assessing learner performance and mapping appropriate assessment methods to instructional strategies and learning objectives. Performance-based assessment and evaluation tools to assess learner performance. Design of formative and summative evaluation methods.

Prerequisites: take EDUC-765.

**EDUC-767 Designing Computer-Based Training (CBT) 3 cr.**

Just-in time scenario-based modular development, user interface design, visual design, usability testing, and execution of common instructional strategies employed by self-paced products. Research, trends and standards in computer-based training; development of reusable learning objects using multimedia software.

Prerequisites: take EDUC-766.

**EDUC-768 Project Management for Instructional Design 3 cr.**

Examination of the initiation, planning, and closure of instructional development projects and practical knowledge on managing project scope, work breakdown structure, schedules, and resources including budgeting. Analysis of instructional development project life cycle.

Prerequisites: take EDUC-767.

**EDUC-770 Thesis 2-6 cr.**

Fall, Spring and Summer

Independent research under direction of investigation adviser. Selection of problem, review of literature, planning and conducting research, interpretation of findings and preparation of final paper according to thesis standards. Student may enroll for two, four or six semester hours of credit in various terms for a final total of six. Consent of program director. Prerequisites: take EDUC-740. **R \$**

**EDUC-782 Instructional Analysis 4 cr.**

Spring

Social/political forces utilized in planning and implementing instruction. Principles and strategies for a self-analysis of teaching behavior. Examination of the social aspects of teacher learning and knowledge production and the relationships between learning and instruction.

**EDUC-790 Professional Portfolio Development 2 cr.**

Principles of professional portfolio development for educators.

Prerequisites: take EDUC-729.

**EDUC-799 Independent Study 1-3 cr. R**

**EDUC-816 Instrumentation for Research 3 cr.**

Basic concepts in the areas of validity and reliability will be studied and applied to the design of instruments. Emphasis will be placed on conceptualizing the constructs or characteristics to be measured. Techniques of item writing, item analysis, determining reliability, and scaling will be covered, including such ideas as acquiescent set, item difficulty and discrimination. The student will engage in the study of procedures and techniques for gathering, analyzing and reporting data and findings as applied to his proposed field study.

**EDUC-895 Field Study in Professional Education 2-6 cr.**

Supervised study which provides the graduate student with the opportunity to: 1) explore in-depth the body of knowledge associated with a selected problem in professional education, 2) provide an educational experience for implementing this knowledge into a selected institutional setting, and 3) devise methods to determine if the implementation is or will be successful. Consent of program director. **\$**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: March 2010

## **EDPSY Educational Psychology**

### **EDPSY-730 Advanced Psychology of Learning for Instruction (2 cr.)**

Theories of learning with applications and implications to the learning environment. Biological bases and psychoeducational models with an examination of instruction and the learning conditions and strategies that promote the acquisition and transfer of knowledge in children, adolescents, and adults.

### **Psychology of Development (3 cr.)**

Study of issues and methods in developmental psychology. Perceptual, language, cognitive, social, emotional, and personality developmental research and theories. Examination of biological underpinnings, interactive effects of biology and the environment on growth and learning from prenatal development to adulthood.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: September 2009

## **ELEC Electricity/Electronics**

### **ELEC-595 Seminar 1-2 cr.**

Specific content is designed to upgrade competencies of participants. Content will change to reflect current state of the art in electricity/electronics or power mechanics. **R**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Reviewed: July 2008

## **ENGGR Engineering Graphics**

### **ENGGR-595 Seminar 1-2 cr.**

(Title will reflect specific design, research and development content.) Current and projected communication methods, concepts, technologies and innovations in design, research and development. R

### **ENGGR-600 Workshop: 1-3 cr.**

Special topics in design, research and development, providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop. R

### **ENGGR-636 Computer Assisted Design Problems 3 cr.**

Advanced CADD applications. Construct three dimensional wireframe drawings. Perform finite element analysis on select components. Customize software for specific applications. Customize software for specific applications. In-depth analysis of CADD applications in mechanical and architectural design.

### **ENGGR-666 3-D Computer Modeling and Rendering 3 cr.**

Development of three-dimensional computer models and computer graphic images. Includes 3-D surface modeling and rendering.

### **ENGGR-792 Special Projects in Drafting / Product Design 2-6 cr.**

Substantive study and activity for specialists in the design, research and development field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant in design, research and development. Preparation of a technical report may be repeated for a maximum of six semester credits. R

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Reviewed: March 2010

## **ENGL English**

### **ENGL-512 International Technical Communication** (3 cr.)

Fall, Spring and Summer

Theories and practical approaches to writing international technical documents, including globalization, localization, and translation preparations and procedures. Extensive use of case studies and cultural models. Scholarship in international technical communication and its relevance to workplace practice will be evaluated.

### **ENGL-615 Technical Writing** (3 cr.)

Fall, Spring and Summer

On-the-job writing for business and industry; reports, letters and other documents.

### **ENGL-625 Usability Design and Testing** (3 cr.)

Spring

Provides hands-on ability to plan, design, and conduct tests. Measures effectiveness and efficiency of written and online documents. Examines methodology and application of usability testing to demonstrate its value and importance.

Prerequisites: take ENGL-415.

### **ENGL-635 Writing Technical Manuals** (3 cr.)

Fall, Spring and Summer

Production of a technical manual-planning procedure, collecting information, analyzing audience, writing and field testing.

### **ENGL-637 Technical Writing Practicum** (1-3 cr.)

Fall, Spring and Summer

Plan, write and produce a technical document for a client. Principles of document design, clear writing for a specific audience, methods of determining client needs, and methods of producing the final document. **R**

### **ENGL-700 Theory and Research in Technical Communication** (3 cr.)

Theoretical concepts and research design in technical and professional communication.

### **ENGL-720 Rhetorical Theory** (3 cr.)

Classical and modern theories of rhetoric and rhetorical analysis.

### **ENGL-730 User-Centered Research for Technical Communicators** (3 cr.)

Theories and practice of user-centered research in technical and professional communication. Emphasis on applying user-centered research methods in a variety of writing and communication contexts.

### **ENGL-735 Field Project in Technical and Professional Communication** (3 cr.)

Completion of an original field project for business and industry, culminating in a deliverable for client and project report presented in a research project format.

Prerequisite: take ENGL-700.

**ENGL-740 Visual Rhetoric for Technical and Professional Communicators** (3 cr.)

Rhetorical theory and technical communication research in document design and related visual communication principles. Strategies for designing documents, data displays, and other products used by technical communicators in the workplace.

**ENGL-745 Communication Strategies for Emerging Media** (3 cr.)

Emerging media and digital technologies as catalysts of cultural change, and how such changes have affected the way technical communicators write, share, and consume materials.

**ENGL-750 Special Topics in Technical and Professional Communication** (3 cr.)

In-depth study of special topics in the field of technical and professional communication.

**ENGL-770 Technical and Professional Communication Thesis** (1-6 cr.)

Selection, investigation, and completion of an original research project, culminating in a paper prepared according to thesis standards describing the problem investigated, literature review, methods, and interpretation of findings.

Prerequisite: take ENGL-700.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: April 2010



## **FCSE Family and Consumer Sciences Education**

### **FCSE-500 Externship: Family and Consumer Sciences Community Education (4-8 cr.)**

Fall and Spring

Practicum in one or more of the following family and consumer sciences education programs: extension services, elementary education, post-secondary education, occupational teaching experience and community educational services. Approval of graduate program director required if taken for graduate credit. Consent of program director.

### **FCSE-503 Family and Consumer Sciences Education in the Middle and Elementary Schools (3 cr.)**

Spring

Develop techniques, materials and curriculum concepts in family and consumer sciences education with application of human growth and development principles for teaching in middle and elementary school.

### **FCSE-520 Vocational Programs in Family and Consumer Sciences Education (2 cr.)**

Fall and Spring

Techniques, materials and curriculum for family and consumer sciences wage-earning programs in secondary and post-secondary schools; preliminary procedures for program development.

### **FCSE-580 Consumer Economics (3 cr.)**

Spring

Personal and family consumer economics for family and consumer education programs; management of human and non-human resources in achieving personal, family and community goals.

Prerequisites: take ECON-201 or ECON-210.

### **FCSE-585 Family Housing (3 cr.)**

Fall

Individual/family's housing needs and resources as a basis for family and consumer education programs. The impact of historical, environmental, social, cultural, and technological, aesthetic, and design influences.

### **FCSE-651 Family Life Education Programs (2 cr.)**

Fall

Development of family life education programs including methods, materials and techniques for teaching family relationships and child development at the secondary level. Instructor's consent required.

### **FCSE-708 Curriculum Studies in Family and Consumer Sciences Education (2 cr.)**

Principles of curriculum construction. Review of recent literature on curriculum

development. Evaluation of curriculum practice and techniques.

**FCSE-710 Applied Evaluation in Family and Consumer Sciences (2 cr.)**

Theory and application of principles in planning evaluation techniques in family and consumer sciences to assess behavioral changes in the cognitive, affective and psychomotor domains.

**FCSE-720 Special Topics in Family and Consumer Sciences (1-2 cr.)**

Consideration of problems in contemporary living that are affecting family and consumer sciences education.

**FCSE-725 Graduate Internship in Family and Consumer Sciences Education (8 cr.)**

Fall and Spring

A clinical assignment in a school for one semester during which time the student integrates in-depth academic knowledge and pedagogical skill. Consent of program director.

**FCSE-735 Problems in Family and Consumer Sciences (2 cr.)**

Identification, selection and completion of a problem in family and consumer sciences, culminating in a Plan B paper.

Prerequisites: take EDUC-740. \$

**FCSE-770 Thesis-Family and Consumer Sciences Education (2-6 cr.)**

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Consent of program director.

Prerequisites: take EDUC-740. R\$

**FCSE-797 Field Experience in Family and Consumer Sciences Education (2 cr.)**

Field experience related to family and consumer sciences education skills and knowledge used in teaching wage-earning courses at secondary level.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: June 2004

## **FN Food and Nutrition**

### **FN-510 Lifespan Nutrition 3 cr.**

Nutrition concepts and concerns associated with each lifespan stage; integration of social, psychological, cultural, economic, and legislative factors to develop issue-centered approaches to meet nutrition needs.

### **FN-512 Nutritional Assessment 2 cr.**

Fall, Spring and Summer

Introduction to basic components of nutritional assessment as applied to individuals.

### **FN-520 Advanced Nutrition 3 cr.**

Principles of human nutrition applied to individual, family, community and world problems.

### **FN-525 Special Topics in Food and Nutrition 1-3 cr.**

Fall

Study of special topics in food and nutrition. **R**

### **FN-530 Institutional Menu Planning 3 cr.**

Fall and Spring

Principles of cycle menu planning, design and marketing for institutional food settings, which includes culinary skills, basic food preparation and modified menus to meet the special dietary needs of an individual or group.

Consent of instructor required.

### **FN-542 Advanced Foods 3 cr.**

Fall

Comparative studies of food selection and preparation; appraisal of foods.

### **FN-550 Food Processing 3 cr.**

Spring

Industrial methods used to prepare and preserve food.

### **FN-555 Sports Nutrition 3 cr.**

Nutritional and metabolic requirements of physical activity. Metabolic fuel utilization during exercise and physiological adaptations to exercise training will be discussed. The health and well-being benefits of an optimal diet-exercise regime will be emphasized.

### **FN-560 Nutrition Counseling: A Team Approach 3 cr.**

Inter-disciplinary team approach to individual and group client-centered nutrition counseling which includes assisting and advising clients on dietary information. Skills and techniques based on nutrition counseling theories that are most useful to registered dietitians in enhancing quality of life and planned nutrition intervention.

Prerequisites: take FN-512.

**FN-600 Food Quality 4 cr.**

The applications of qualitative and quantitative tools in conjunction with statistical methods to implement quality management in the food industry.

Prerequisites: consent of the instructor.

**FN-606 Nutrition Education 3 cr.**

Fall and Spring

Nutrition education as planned behavioral change: problems and solutions in instructing various populations; identification, development and evaluation of nutrition resources.

**FN-610 Food and Nutrition Policy Regulation and Law 3 cr.**

Food and nutrition policy development and evolution. Key acts and agencies governing food regulation and law. Process of creating or changing law. Compliance and enforcement rules in inspection, labeling, export and import. Administrative practice in food law including proceedings and judicial review.

**FN-613 Maternal and Child Nutrition 3 cr.**

Fall

Application of principles to maternal, infant, child and adolescent nutrition.

**FN-614 Catering 3 cr.**

Theory and application of operational and managerial principles for on/off-premise catering for special events. Cannot be taken for credit by students who have previously taken HT-624.

**FN-615 Nutritional Issues in Gerontology 3 cr.**

Theory and relationships of nutrition, longevity and aging. Food and nutrition legislation for the elderly--theory and implementation. Nutritional implications of acute and chronic disease states common among the elderly.

Prerequisites: take FN-520 and CHEM-511.

**FN-617 Medical Nutritional Therapy I 3 cr.**

Principles and methods for use in certain pathological conditions or chronic and acute disease processes. Incorporates principles of medical nutritional therapy in nutrition assessment, diet prescription, medications, care plans and documentation.

Prerequisites: take FN-512.

**FN-618 Medical Nutritional Therapy II 4 cr.**

Fall and Spring

Principles and methods for use in certain pathological conditions or chronic and acute disease processes. Incorporation of the principles of nutrition assessment, diet prescription, medications, care plans, and documentation into the management of disease processes.

Prerequisites: take FN-512.

**FN-620 Food Styling 1-3 cr.**

Fall and Summer

Food as media for artistic expression; effective use of color, form and texture. **R**

**FN-631 Readings in Food Science and Nutrition 1-2 cr.**

Critical reading, evaluating, and reporting from pertinent current journals and other publications. **R**

**FN-638 Experimental Foods 3 cr.**

Fall and Spring

Experimentation with selected food materials, techniques and equipment; directed study in individually chosen area.

**FN-650 Food Engineering 3 cr.**

Fall

Application of pertinent chemistry, physics and mathematics principles to food processing.

**FN-661 Multicultural Aspects of Food and Nutrition Patterns 3 cr.**

Food and nutrition patterns as influenced by social, religious, geographical, economic and political factors. Cultures emphasized include Native American, African American, Hispanic and Asian American. Food as a means of cross-cultural communication.

**FN-670 Food Distribution Operations and Control 3 cr.**

Current trends and management strategies in the distribution of food and beverages, from manufacturer to consumer.

**FN-701 Trends in Nutrition 2 cr.**

Practical application of recent developments in the field of nutrition. **R**

**FN-710 Clinical Nutrition 3 cr.**

Innovative approaches in nutrition therapy. Clinical experience offered in area health care facilities. Prerequisites: take FN-618.

**FN-712 Practicum in Community Nutrition Programs 1-2 cr.**

Advanced experience in community nutrition programs. Individual project in nutrition counseling, identification, delivery and evaluation of nutrition and appropriate food services.

Prerequisites: take FN-606 and FN-618. **R**

**FN-715 Menu Analysis and Planning 3 cr.**

Principles of planning and designing menus for production and sales in commercial and institutional food services. Special emphasis is given to computerization of the menu planning process.

**FN-720 Workshop in Foods 1 cr.**

Discussion of current issues in food science and technology, food marketing and management, and for developing strategies for conducting and disseminating food related research. Includes critical analyses of variety of food oriented research projects. **R**

**FN-721 Workshop in Nutrition 1 cr.**

Individual and group investigations and solutions of problems in nutrition science and nutrition education. **R**

**FN-735 Problems in Food Science and Nutrition 2 cr.**

Identification, selection and completion of a problem in food science and nutrition, culminating in a Plan B paper and oral presentation of the paper.

Prerequisites: take EDUC-740. **\$**

**FN-736 Micronutrients 3 cr.**

Absorption and intermediary metabolism of minerals, vitamins and other organic compounds with nutritional relevance. Analysis and application of current research as it relates to these micronutrients are emphasized.

**FN-737 Macronutrients 3 cr.**

Digestion, absorption, transport, metabolism, health concerns, functions and micronutrient interrelationships to water, carbohydrate, lipid and protein are the focus of this course. Analysis and application of current research related to these macronutrients are emphasized.

**FN-738 Medical Nutrition for the Geriatric Person (3 cr.)**

Medical nutritional care of the long term care, home health, and extended care for the elderly, geriatric patient/individual/person. Regulatory compliance, nutrition documentation, nutrition assessment and standards of nutritional care.  
Prerequisites: take FN-615, FN-617, or FN-618 or consent of instructor.

**FN-740 Food Preservation Technology 3 cr.**

Application and evaluation of the technology of food preservation to selected areas in food science.  
Prerequisites: take CHEM-511.

**FN-742 Sensory Evaluation of Food 3 cr.**

Selection, identification and measurement of food evaluation tools using consumer and laboratory sensory panels.

**FN-746 Food Innovations 2-3 cr.**

Effects of food industry innovations on preparation and service of foods.

**FN-750 Food Packaging 3 cr.**

Fall

Interrelationship of food and packaging. Technical content appropriate to solve complex and interrelated problems in food packaging research and development. Instructor's consent required.

**FN-756 Advanced Experimental Food 3-4 cr.**

Fall and Spring

Principles of research methods applied to directed investigations in food preparation.  
Prerequisites: take FN-638.

**FN-770 Thesis--Food Science and Nutrition 1-6 cr.**

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, preparation of the final paper according to thesis standards and oral presentation of the research. Student may enroll for variable semester hours of credit in various terms with a final total of six. Consent of program director.  
Prerequisites: take EDUC-740. **R \$**

**FN-865 Supervised Practice in Medical Nutrition Management 3-14 cr.**

Supervised practice experience in clinical, community nutrition and foodservice

management. Structured experiences are provided at hospital, clinic, community and public school sites. Successful completion of more than 900 hours for 18 credits meets the American Dietetic Association requirement for a supervised practice program.

Prerequisites: FN-710 and FN-606 and FN-712, minimum grade B for each course. **R**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: April 2010

## **GCM Graphic Communications Management**

### **GCM-500 Workshop (1-3 cr.)**

Fall, Spring and Summer

Special topics in graphic communications, providing hands on or experiential learning activities. Specific content and title to reflect the topic of the workshop. **R**

### **GCM-551 Cross-Media Marketing Systems (3 cr.)**

Fall and Spring

Software and systems used to plan and produce personalized and integrated cross-media (Web, print, PDF, e-mail) marketing/promotion communication. PDF editing and repurposing, digital asset management, databased, layout issues, dynamic content, scripting, automation, variable data digital printing and personalization, digital distribution alternatives, and web storefronts.

### **GCM-562 Screen and Speciality Print Manufacturing (3 cr.)**

Fall and Summer

Applications and techniques for screen and specialty printing on a variety of substrates. Issues and process-control concerns related to these image transfer methods. **\$**

### **GCM-563 Package Printing (3 cr.)**

Fall and Spring

Production of graphics on labels, cartons, and flexible packages with an emphasis on flexography and rotogravure. Present and future technology trends in package printing. **\$**

### **GCM-580 Graphic Communicaitons Estimating and Scheduling (3 cr.)**

Fall and Spring

Graphic communications workflow management issues including cost of production or services, estimating practices, production scheduling and coordination of both print and non-print graphic communications projects.

### **GCM-643 Graphic Communications Practicum (3 cr.)**

Fall, Spring and Summer

Integration of all graphic communications manufacturing processes in the design and production of print and non-print graphic products and services for clients in the university community. Special emphasis on the process and workflow management roles of estimating, customer service, scheduling, planning, production supervision and quality control. **R**

### **GCM-643 Graphic Communications Practicum (3 cr.)**

Fall, Spring and Summer

Integration of all graphic communications manufacturing processes in the design and manufacture of printed products. Special emphasis on the process and workflow management roles of estimating, customer service, scheduling, planning, production supervision and quality control. Instructor's consent required. **R**



**GCM-645 Publication Production (3 cr.)**

Fall, Spring and Summer

Cross-discipline work teams experience integration of skills developed in English, speech, art, graphic communications, industrial management and business courses to design, plan, schedule, produce and distribute print and digital versions of a magazine/newsletter.

**GCM-646 Digital Imaging (3 cr.)**

Fall and Spring

Preparation, capture and manipulation of digital information for current and emerging digital distribution technologies. Repurposing of print media files for alternative distribution systems.

**GCM-680 Graphic Communications Customer Service And Administration (3 cr.)**

Fall and Spring

Administrative, management and leadership roles in directing functional areas of of graphic communications companies including sales, customer service, management, human resources, and training. Senior level or higher.

**GCM-695 Graphic Communications Management Seminar (3 cr.)**

Fall, Spring and Summer

Overview of the graphic communications industry; its size, market segments, profitability and organization. Research and analysis of company annual reports. Strategic planning, management and leadership, industry trends and forecasts, trade organizations, news and other information sources. Impact of technology, global issues, and competing information distribution channels. **R**

**GCM-792 Special Issues in Graphic/ Telecommunications (2-6 cr.)**

Fall, Spring and Summer

Substantive study and activity for specialists in the graphic/telecommunications fields to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant in graphic/telecommunications. Preparation of a technical report. May be repeated for a maximum of six semester credits. Prerequisites: take TECED-739. **R**

**GCM-797 Field Experience (1 cr.) **R****

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: January 2007

## **GEM Golf Enterprise Management**

### **GEM-645 Event Management** (3 cr.)

Planning, organizing and the management of events will be investigated for the hospitality, tourism and golf industries. Emphasis is placed on the design, internal management systems and post event evaluation.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: October 2008

## **HDFS Human Development and Family Studies**

### **HDFS-510 Family Stress, Coping and Adaptation (1 cr.)**

Fall, Spring and Summer

Impact of family development and stress on individual and family well-being.

### **HDFS-513 Parent Education and Involvement (2 cr.)**

Fall and Spring

Parent groups: training of leaders, survey of literature.

### **HDFS-520 Divorced, Single Parent and Remarried Family (2 cr.)**

Fall and Spring

Trends and issues in divorce, single parenting and remarriage related to effects on adults, children and society.

### **HDFS-525 Human Development: Middle Childhood and Adolescence (3 cr.)**

Fall and Spring

Empirical study of physical, intellectual, social and emotional development of children.

### **HDFS-530 Human Development: Early and Middle Adulthood (3 cr.)**

Fall and Spring

Study of adults in the family context during the early and middle years.

### **HDFS-532 Death and Bereavement (3 cr.)**

Spring and Summer

Significance of death and bereavement for the American culture, individual and family. Special consideration given to major tasks of grieving for children and adults.

### **HDFS-535 Seminar: Culturally Diverse Individuals and Families (2 cr.)**

Fall and Spring

Study of cultural, ethnic, racial and economic influences on individuals and families in the United States. Emphasis on knowledge and skills to improve human relations in settings serving individuals and families.

### **HDFS-536 Experience: Developing Cultural Competence (2 cr.)**

Fall and Spring

Fifty hours experience interacting with individuals and/or families of an ethnic minority group whose background the student does not share; and/or with foreign-born persons of color, persons with disabilities, sexual minorities and persons of various ages and socio-economic groups.

### **HDFS-540 Human Development: Late Adulthood (3 cr.)**

Fall and Spring

Survey of the field of gerontology focusing on what it means to grow old in the United States from a systemic perspective. Multicultural attitudes toward aging; the psychological, physical, social and economic needs and problems of the older population

are addressed. Consideration will be given to the personal, familial, environmental and social resources of the older population.

**HDFS-541 Family Caregiving to Dependent Elders (1 cr.)**

Fall and Spring

Unique challenges confronting adult children who provide care to aging parents. Government, agency, workplace and family policies and practices promoting and/or undermining family strengths and well-being.

**HDFS-545 Health Care Dilemmas and Decisions for Families (3 cr.)**

Fall and Spring

Bioethical issues facing U.S. families. Selected issues provoke deep and troubling questions that will be addressed from a multidisciplinary perspective through readings, student-led discussion, lectures, and case reviews.

**HDFS-550 Women's Relationships in Later Life (3 cr.)**

Women's experiences in later life. Impact of race, culture, class, sexual orientation upon aging. Images of aging women in contemporary literature and the media. Older women's experiences in familial relationships and friendships.

**HDFS-552 Sexual Minority Individuals and Families (2 cr.)**

Contextual knowledge and understanding of sexual minority individuals and families.

**HDFS-560 Work and Family Issues (3 cr.)**

Spring

Effects of employment and family careers and varying patterns of combining work and family.

**HDFS-564 Sibling Relationships (3 cr.)**

Spring

Sibling relationships across the life course, examining the issues, processes and dynamics affecting these bonds.

**HDFS-565 Family Resource Management (3 cr.)**

Fall and Spring

Examination of individual and family use of resources to attain goals. Exploration of methods for working with individuals and families regarding family resource management. Identification of socio-cultural influences of poverty and decision making.

**HDFS-575 Grantsmanship For Nonprofits (1-2 cr.)**

Explore the availability of foundation grant money for nonprofit organizations. Designed to give the beginning grant writer an overview of grant purposes, foundation funding sources, proposal development and writing.

**HDFS-595 Special Topics in Human Development (1-2 cr.)**

Special topics in human development; repeatable for different topics. **R**

**HDFS-623 Spirituality Across the Lifespan (2 cr.)**

Seminar discussion of autobiographical and biographical accounts of individual's spiritual experiences, beliefs and spiritual development over the life cycle.

**HDFS-626 Special Topics in the Study of Family Life (1-3 cr.)**

Family life programs and literature; individual study of problems of personal or professional interest.

**HDFS-640 Child and Family Law (3 cr.)**

Fall and Spring

Legal issues affecting children and families.

**HDFS-642 Geriatric Functional Assessment (4 cr.)**

Fall

Multi-disciplinary assessment applied to elderly at critical transition points. Assessment of social and economic status, functional status (activities of daily living and instrumental activities of daily living), mental health, and environmental characteristics. Explore various measurement instruments. Background check required.

Prerequisites: take HDFS-540.

**HDFS-650 Family Policy (3 cr.)**

Fall and Spring

Content, methods and process of assessing impact of public policy on children and families.

**HDFS-654 Suicide and the Family: Family and Community Intervention (1 cr.)**

Analysis of attempted and completed suicides from an interdisciplinary perspective. Forms of intervention, with emphasis upon family therapy, are compared, contrasted, and evaluated for suitability.

**HDFS-656 Abuse and the Family (3 cr.)**

Fall and Spring

Definition and analysis of types of abuse in family context. Interrelationship of victims, perpetrators, other family members, helping professionals, social context. Risk factors, effects, reporting and recovery.

**HDFS-703 Child and Adolescent Development Seminar (3 cr.)**

Advanced seminar in various aspects of child and adolescent development.

**HDFS-704 Child and Family Services (2 cr.)**

Summer

Review and analysis of the historical development and statutory base of child and family services as well as the social values, issues and trends that shape them.

**HDFS-707 Issues and Problems in Parent Education (2 cr.)**

A study of the issues and problems of parent groups and the training of parent-group leaders. Instructor's consent required.

**HDFS-715 Theories of Family Processes (2 cr.)**

Fall and Summer

Advanced analysis of family interaction theory. Emphasis is on normal family processes as they apply to the practice of marital and family intervention.

**HDFS-728 Contemporary Family Issues (3 cr.)**

Summer

Contemporary family issues and trends addressing continuity as well as the changing

nature of relationships and families. Emphasis on family change within the larger context of ecological, demographic and economic change.

**HDFS-735 Problems in Family Studies and Human Development (2 cr.)**

Identification, selection and completion of a problem in family studies and human development, culminating in a Plan B paper. \$

Prerequisites: take EDUC-740.

**HDFS-740 Issues in Family Life Education (2 cr.)**

Summer

Review of community-based programs for family and human development issues across the lifespan with consideration for personal philosophy, theory, research, development and evaluation of existing program models.

**HDFS-742 Lifespan Family and Human Development Seminar (2-3 cr.)**

Fall, Spring and Summer

Human development theory; research, changing trends and issues are explored with focus upon family life cycle variations. Emphasis is given to the application of scientific knowledge to select issues and thematic narratives of lifespan development as well as to information regarding child development in families and their sociocultural contexts.

**HDFS-746 Theory Based Qualitative and Quantitative Research Methods (3 cr.)**

Summer

Fundamentals of family and developmental research. Focus on qualitative and quantitative research designs, the role of theory, methods of data collection and analysis, and unique factors associated with family research. Preparation for completion of the comprehensive graduate project.

**HDFS-770 Thesis-Family Studies and Human Development (2-6 cr.)**

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Consent of program director. R \$

Prerequisites: take EDUC-740.

**HDFS-797 Field Experience in Human Development and Family Studies (2 cr.)**

Field experience related to family and consumer sciences education skills and knowledge used in teaching wage-earning courses at secondary level.

**HDFS-799 Independent Study(1-3 cr.) R**

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Back to [Course Descriptions](#)

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The Graduate Bulletin

Revised: April 2010

## HLTED Health Education

### **HLTED-560 Personal Health and Fitness (3 cr.)**

Spring and Summer

Analysis of consequences of individual decisions and lifestyle choices related to personal health and well being.

### **HLTED-575 Methods in Health Education (2 cr.)**

Fall

Teaching methods related to the content of elementary and secondary school health curriculum. Individual presentations and teaching of health lessons.

### **HLTED-576 Organization and Administration of Health Education (3 cr.)**

Spring and Summer

Planning, promoting, and implementing comprehensive health education programs at the elementary, middle, and secondary levels. Needs assessment; curriculum development and coordination; public relations; and the development of cooperative relationships with parents, private business, and voluntary and community health agencies.

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**Back to [Course Descriptions](#)**

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The Graduate Bulletin

Revised: February 2007

## HT Hospitality and Tourism

### **HT-515 Gaming Management** 3 cr.

Overview of casino gaming operations in the hospitality and tourism industry from a global and local perspective. Must be 18 years or older. \$

### **HT-516 Casino Operations Management** 3 cr.

Functions and transactions associated with the gaming operations environment within a resort casino. Must be 18 years or older.

### **HT-517 Psychosocial Issues in Gaming** 3 cr.

A hospitality management and societal perspective of the pros and cons of gambling entertainment. Must be 18 years or older.

### **HT-523 Food Service Equipment** 2 cr.

Factors affecting design, selection, physical facilities and utilities involved in foodservice equipment.

### **HT-524 Quantity Food Production** 4 cr.

Quantity food production management concepts; menu planning, work production schedules, production analysis, food and labor cost controls, and sales projections, crisis and service

management techniques; lab work in quantity food production and service; recipe development and introduction to productivity and work simplification concepts.

### **HT-526 Introduction to Wines and Spirits** 3 cr.

Applied and historical knowledge of wines and spirits from different regions of the world; emphasis on preparation, selection, accompaniment with food, basic cost control analysis and service. Must be 21 years or older. \$

### **HT-530 Resort Planning and Operation** 3 cr.

Planning and operation of individual destination resorts. Analysis of resort concept, history, master planning, environmental impact, facility design, maintenance and operational management. Prerequisites: take HT-630. \$

### **HT-535 Lodging Operations Management** 3 cr.

Investigation of supervisory roles in lodging management, with an emphasis on the importance of financial statements and their interpretation, human resources and productivity, and providing quality hospitality services within all types of lodging facilities.

### **HT-540 Development of Tourism Attractions** 3 cr.

Diversified natural and man-made background tourism elements (BTE): preservation and incorporation of concepts for development of tourism destinations.



**HT-544 Hospitality and Tourism Marketing and Sales** 3 cr.

Analysis of marketing strategy, sales techniques, promotional tools, and research for hospitality and tourism development.

**HT-551 Hospitality Convention/Meeting Planning** 3 cr.

The roles and responsibilities of professional hospitality meeting planners and hotel convention sales/service managers are examined for purposes of planning or hosting a major convention, or a corporate, association, or special group meeting event.

**HT-553 Computer Systems for Food Service** 3 cr.

Functions of computers in a variety of food service operations with specific emphasis on spreadsheets and food service application software. Experience using state-of-the-art technology and microcomputers.

**HT-560 Tourism for Persons with Disabilities** 2 cr.

Strategies to accommodate the inclusive and special hospitality and travel preferences of persons with disabilities within the hospitality and tourism industry.

**HT-562 Foodservice Finance and Cost Control** 3 cr.

The use of financial techniques and systems to control food, beverage, and labor costs in hospitality food service operations.

**HT-570 Principles of Property Management** 3 cr.

Property management fundamentals. Topics include ownership goals, management direction, finance and maintenance of multi-family and commercial properties.

**HT-571 Commercial/Residential Property Development and Management** 3 cr.

Exploring factors involved in developing and managing property, both residential and commercial, including undeveloped land. Topics include feasibility studies, financing, appraisal, leases, purchase agreements and management contracts.

**HT-583 Yield Management** 3 cr.

Investigation of the use of computer technology in the lodging industry for revenue planning, scheduling and performance evaluation. Specialized software will be used to analyze and evaluate hotel performance. Prerequisites: take STAT-130.

**HT-618 Casino Tourism** 3 cr.

Research/travel and visits with Chambers of Commerce, casino management personnel, and governing entities to study economic, sociological and cultural impacts of gaming within a particular global or local region. Must be 18 years or older. \$

**HT-623 Wine and Food Pairing** 4 cr.

Matching wine and food from different parts of the world using flavors, textures, and components present in food and wine as complementing strategies. Emphasis on menu planning, food preparation, cooking methods and wine tasting with foods. \$

**HT-624 Catering** 3 cr.

Theory and application of operational and managerial principles for on- or off-premise catering for special events.

**HT-626 Restaurant Operational Management** 4 cr.

Application of the principles of food and beverage management in full service restaurants existing as independent units or as units within a commercial/ noncommercial foodservice operation. The course will emphasize fine dining, fine cuisine and control systems.

**HT-627 Professionalism: Social and Work Environment** 1 cr.

The application of necessary skills to be professional in social and work environments with emphasis on professional dress, proper dining etiquette, business conversation, and job search techniques. \$

**HT-630 Lodging Administration** 3 cr.

Analysis of theories, principles and techniques of lodging management; problems and issues encountered by management in providing quality service within cost-efficient organization.

Prerequisites: take HT-583.

**HT-640 Sociocultural Systems of Tourism** 3 cr.

Various psychosocial dimensions of tourism: motivation, development, community and conflict as related to consumer-tourists, tourists and residents.

**HT-642 Trade Show Management** 3 cr.

Investigate and apply the processes and procedures to plan and manage a trade show from a developer and user perspective. Define the processes to select and develop, arrange for site and support services leading to a profitable trade show.

**HT-645 Event Management** 3 cr.

Planning, organizing and the management of events will be investigated for the hospitality, tourism and golf industries. Emphasis is placed on the design, internal management systems and post event evaluation.

**HT-647 International Convention and Meeting Management** 3 cr.

Investigate the process and procedures to plan for meetings in other countries.

Prerequisites: take HT-551.

**HT-650 Food Service Administration** 3 cr.

Organization and administration of institutional foodservice systems, personnel selection and training, cost control and problems of supervision.

**HT-651 Integrated Management Systems -- Hospitality** 2-3 cr.

Exploration, comparison and synthesis of practices, concepts and theories in hospitality management systems. Senior Level Or Higher.

**HT-652 Hospitality Professionalism** 2 cr.

Prepare hotel, restaurant and tourism students as professionals in a global community. Role-play emphasis on professional dress, dining etiquette, culture and business conversation, job search and placement techniques.

**HT-654 Security and Risk Management For the Hospitality Industry** 3 cr.

Advanced investigation of security and risk management within hospitality/service industries. \$

**HT-657 Hospitality Management Strategies** 3 cr.

Comparison and synthesis of hospitality management strategies; concepts and theories in relationship to long-term hospitality business goals and objectives. Capstone course for senior-level hospitality and tourism students. Senior Level or Higher. Prerequisites: take HT-562.

**HT-660 Hospitality Industry Law and Liability 3 cr.**

Laws applicable to ownership and operation of inns, hotels, motels, restaurants and other places of public hospitality.

**HT-661 Hospitality Employee Relations 3 cr.**

History and legal strategies and tactics in dealing with hospitality employees in both union and non-union settings.

**HT-662 Hospitality -- Financial Analysis/Budget/Forecasting 3 cr.**

Application of accounting and financial analysis techniques to managerial decision-making in hospitality industry.

**HT-670 Seminar in Property Management 3 cr.**

Capstone course for Property Management. Preparation of a property management plan for a specific property. Discussion of current trends and industry problems. Exploration of development and operating strategies of property management firms.

**HT-681 Special Problems in Hospitality and Tourism 1-3 cr. R**

**HT-700 Issues in Hospitality and Tourism 3 cr.**

Significant topics, trends and issues in hospitality and tourism are investigated, developed and presented. Admission to MS in Hospitality and Tourism.

**HT-701 Hospitality and Tourism Research Interpretation 3 cr.**

Interpretation of advanced qualitative and quantitative research findings in the hospitality and tourism industries. Includes examination of data collection techniques and current research trends, including segmentation, group differentiation, product positioning and image formation.

**HT-702 Seminar in Hospitality and Tourism 1 cr.**

Discussion and interpretation of recent research in hospitality and tourism. Choice of problems based upon the needs and interests of the students.

**HT-717 Hospitality and Tourism Colloquium I 1 cr.**

Hospitality and Tourism graduate faculty and guest lecturers will present research concepts, issues and studies related to hospitality, tourism and travel related industries. The focus is on issues relevant to the students and their hospitality and tourism research project.

**HT-718 Hospitality and Tourism Colloquium II 1 cr.**

Hospitality and Tourism graduate faculty and guest lecturers will present research concepts, issues and studies related to hospitality, tourism and travel related industries. The focus is on issues relevant to the students and their hospitality and tourism research project.

**HT-735 Problems in Hospitality and Tourism 3 cr.**

Independent research under direction of research adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, research methodology, conducting research in the hospitality of tourism field. Interpretation of results and a formal presentation is

required. Consent of Program Director. Prerequisites: take HT-701. \$

**HT-747 Seminar in Hospitality Management 3 cr.**

Contemporary management theories and techniques to effectively manage a dynamic and diverse hospitality and tourism industry. Topics will address issues that relate to current and future

needs. R

**HT-749 Cooperative Education/Internship 1-6 cr.**

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one. R

**HT-751 Strategic Management in Hospitality 3 cr.**

Strategies used by hospitality managers and owners to achieve organizational objectives.

**HT-753 Managing Finance in the Hospitality Industry 3 cr.**

Analytical skills needed to interpret and act upon financial data and information that lead to sound financial decisions for hospitality organizations. Capital budgeting methods, financial statement analysis, break even analysis, short and long-term financing methods, and cost controls.

**HT-754 Managing Technology in Hospitality and Service Industries 3 cr.**

Understanding information technology, systems development methodologies, and strategic information systems planning from a service industry perspective. Thinking tactically, strategically, and creatively in applying information technology solutions to meet the global business environment and drive new hospitality business opportunities.

**HT-755 Leadership and Management in the Hospitality Industry 3 cr.**

Leadership principles, values, and strategies in the hospitality industry. Leadership as a process and a function which can be exercised from anywhere in the organization.

Initiating and accommodating individual and organizational change; motivation and conflict management strategies for diverse hospitality/tourism environments.

**HT-756 Hospitality and Tourism Quality Assurance and Customer Service 3 cr.**

Evolution of the service quality movement, assessment, and analysis and synthesis of profitable service business models.

**HT-758 Hospitality Operational Systems 3 cr.**

Capstone opportunity to explore, compare and synthesize the practices, concepts and theories in global hospitality management systems. Evaluating and solving operational problems.

**HT-770 Thesis in Hospitality and Tourism 1-6 cr.**

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, research methodology, conducting of research, interpretation of findings, and preparation of the

final draft according to thesis standards. Student may enroll for variable credits in various semesters with a final total of six. Prerequisites: take EDUC-740 and HT-701. \$

**HT-798 Hotel and Restaurant Field Experience** 1-2 cr.

Off-campus work and study in an approved position to better understand the challenges and potentials of various careers in the hospitality area.

**HT-799 Independent Study** 1-3 cr. **R**

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**Back to [Course Descriptions](#)**

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The Graduate Bulletin

Revised: September 2009

## **ICT Information Communication Technologies**

### **ICT-500 Workshop** (1-3 cr.)

Fall, Spring and Summer

Special topics in telecommunication systems, providing hands on or experiential learning activities. Specific content and title to reflect the topic of the workshop. **R**

### **ICT-504 Communications and Information Systems** (1-3 cr.)

Fall, Spring and Summer

Overview of the communications industry. Use of systems to create, process, transmit, receive and evaluate information.

### **ICT-505 Office Automation Technology** (3 cr.)

Fall, Spring and Summer

Automation information concepts and technology used in office including both communication, storage, and retrieval systems. Emphasis on cost effective selection and implementation problems.

### **ICT-601 Information Technology Policy and Audit** (3 cr.)

Fall and Spring

Information technology policy, regulatory and audit issues, international standards, and internal security strategies.

### **ICT-701 Information and Communication Technologies in Organizations** (3 cr.)

Summer

Evaluation of information and communication technologies. Impacts and development of information and communication technologies in organizations and society.

### **ICT-702 Seminar in Information and Communication Technologies** (3 cr.)

Current topics in information and communication technologies. Use of portfolios for assessment. Use of multimedia tools to create a portfolio. Development of competencies to meet the M.S. in Information and Communication Technologies requirements. Create a portfolio framework.

Prerequisite: Take ICT-701

### **ICT-780 Information and Communication Portfolio** (1-3 cr.)

Develop and present a portfolio that contains artifacts and research-based reflections that demonstrate the competencies for the M.S. in Information and Communication Technologies. The final product is an electronic portfolio.

Prerequisite: Take ICT-702. **R**

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**Back to [Course Descriptions](#)**

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The Graduate Bulletin  
Reviewed: March 2010

## **INMGT Industrial Management**

### **INMGT-500 Engineering Economy (2-3 cr.)**

Fall, Spring and Summer

Source and application of funds: cost control, valuation, depreciation, replacement theory and taxation.

### **INMGT-501 Seminar (1-3 cr.)**

(Title will reflect specific business or management content.)

Current topics in business and industrial management to meet specific needs of students enrolled. **R**

### **INMGT-502 Seminar (1 cr.)**

Elements of time management, strategies and techniques in industrial and business environments. Analysis of time use by all levels of management.

### **INMGT-510 Production Processing (3 cr.)**

Fall and Spring

Production processes, especially product design as related to economic production; factors that influence choice and sequence of process to obtain end product.

### **INMGT-514 Industrial Enterprise Practicum (3 cr.)**

Fall, Spring and Summer

Organization and operation of an industrial company; election, designing, production planning, production, marketing and distribution of a product.

### **INMGT-520 Quality Tools (3 cr.)**

Fall, Spring and Summer

Practical and statistical quality control in design and use of quality assurance programs: quality engineering, manufacturing quality assurance and product quality assurance.

### **INMGT-525 Quality Management (3 cr.)**

Fall, Spring and Summer

Provides the managerial and technical knowledge necessary to prepare, document, manage, and evaluate quality systems from beginning design through system operation and post-delivery customer services within a product or service environment.

### **INMGT-535 Lean Manufacturing Systems (4 cr.)**

Fall

Introduction to production/operations management and lean manufacturing system design for engineers. Emphasis is given to analysis and design of production systems, facility layout, and globalization.

### **INMGT-550 Facilities Planning (3 cr.)**

Spring



Study of facilities location, structure, and planning for efficient layout and material handling systems.

**INMGT-565 Project Management (3 cr.)**

Fall, Spring and Summer

Planning, scheduling, and control of technical projects. Topics covered include activity identification, network diagrams, scheduling, PERT/CPM, cost analysis, resource management, and computer control.

**INMGT-600 Organizational Leadership (3 cr.)**

Overview of the leader's role in accomplishing organizational objectives through the management of human resources. Concepts of organizational and individual behavior serve as a foundation for the development of such leadership skills as communication, motivation, initiating change, team building, delegation, building credibility, and conflict management.

**INMGT-601 Management Consulting (2 cr.)**

Summer

The organization and analysis of major elements of the consulting profession in management: 1) subject matter expertise, 2) marketing, 3) organizational development, 4) business principles for consultants and 5) communication skills; synthesis of the interdependent relationship of the major elements in the consultation process.

**INMGT-605 Resource Planning and Materials Management Practicum (3 cr.)**

Fall and Spring

Provides students with specific skills in managerial techniques for planning, scheduling and controlling resources in manufacturing and service organizations. Focuses on the first two of the five required APICS exams that lead to certification as a Certified in Production and Inventory Manager (CPIM).

Prerequisites: take INMGT-505.

**INMGT-610 Six Sigma Quality Improvement Methods (3 cr.)**

Fall and Spring

Overview of Six Sigma quality improvement applications. Application of scientific methods to improve quality of products, service, processes, and management systems.

**INMGT-615 Inclusivity in Leadership (3 cr.)**

Winterm

An examination of leadership dynamics for, but not limited to, women, people of color and other underrepresented populations including approaches to leading, communicating, and developing inclusive organizations.

**INMGT-616 People Process Culture (3 cr.)**

Fall and Spring

A study of high performing people process culture organizations integrating sociology, applied psychology, and organization behavior subject matter areas.

Prerequisites: take INMGT-600 or PSYC-582.

**INMGT-620 Quality Assurance — Practicum (3 cr.)**

Fall and Spring

Application of principles and techniques learned in INMGT-520, as part of Professional Semester/ Manufacturing Laboratory.

Prerequisites: take INMGT-520, INMGT-525.

**INMGT-622 Quality Engineering (3 cr.)**

Fall and Spring

Practical and statistical engineering methods to improve quality and design in a manufacturing environment.

**INMGT-625 Planned Experimentation for Quality Improvement (3 cr.)**

Fall

Quality improvement through planned experimentation that focuses on product realization activities which consist of new product design and formulation, manufacturing process development and improvement.

**INMGT-630 Employee Involvements: Work Teams (2 cr.)**

Summer

Background and history of employee involvement, teams as a method of employee involvement, analysis of the advantages and disadvantages of different team structures and the planning processes used to implement team structures, analysis of situational variables used to help design the best team approach for an organization, the support systems needed to maintain teams, phases of team development, facilitation skills, and team problem-solving methods.

**INMGT-640 Lean Enterprise (3 cr.)**

Fall and Spring

Principles of lean techniques, justification of lean systems, how lean systems are scheduled, and cost analysis of a lean environment.

**INMGT-660 Industrial Management (2 cr.)**

Summer

Principles and methods of analyzing and solving industrial problems; application through case studies, management games and special problems.

**INMGT-662 Global Manufacturing Study Tour (2-3 cr.)**

Summer

Visit global sites to understand the current state of product design, manufacturing, and distribution in both developed and developing countries. Learn how to develop supplier, manufacturing, and distribution systems in a global setting.

**INMGT-675 Advanced Project Management (3 cr.)**

Fall and Spring

Advanced planning, control, and leadership of technical projects and programs. Topics covered include: project and program justification, project management maturity and methods, multiple project or portfolio management, project management in multinational cultures, virtual project teams, requirements definition, and outsourcing.

Prerequisites: take INMGT-565.

**INMGT-700 Organizational Research Methods (3 cr.)**

Fall, Spring and Summer

Quantitative and qualitative approaches to organizational and industrial research.

Application of appropriate research tools to understand interpersonal relationships, analyze and design jobs, organizations and systems. This course should be taken the next to last semester in a student's coursework. Development of a research proposal that may be used

to complete master's level field project/thesis.

**INMGT-705 Enterprise Resource Planning (3 cr.)**

Spring

Systems management of enterprise resource planning software used to integrate corporate functional areas. Modules, databases, and system architecture of the software. Assessment, selection, planning, implementing and managing enterprise systems.

**INMGT-710 Seminar in Technology Management (2 cr.)**

Spring

Presentation and discussion of current theory, practice and trends in business strategy, processes, operations, globalization, leadership, professional development, and management of technology. Topics will vary by semester.

**INMGT-720 Foundations in Industrial Operations (2 cr.)**

Fall, Spring and Summer

This course is designed to improve the student's competencies in all aspects of industrial technology. A major professor will be identified who will serve as a tutor in guiding the student's self-development program. There will be a culminating matriculation to candidacy examination to assure minimum proficiency standards.

**INMGT-730 Advanced Technical Problems in Industrial Management (2-6 cr.)**

Advanced study in industrial management, management control, product development or process and facility planning. Recent developments, advanced technical work, experimental work and technical reports. A specific problem area for study in this course must be identified by the student prior to registering for this course.

**INMGT-735 Problems in Technology Management (2-4 cr.)**

Fall, Spring and Summer

Identification, selection and completion of a problem in technology management culminating in a Plan B paper. Admission to MS in Technology Management. \$

**INMGT-740 Decision Modeling (3 cr.)**

Fall

Application of quantitative methodology in industrial decision making. Topics include mathematical modeling, optimization algorithms, linear programming applications, integer programming applications, non-linear programming applications, and simulation.

**INMGT-745 Advanced Manufacturing Simulation (3 cr.)**

Fall

Theory and practice of simulation modeling of manufacturing systems. Theoretical aspects include types of simulation language, data distribution goodness-of-fit, warm-up and run length determination, statistical output analysis, optimization, and variance reduction. Models will be developed, run, animated, and analyzed using a high-level simulation language.

**INMGT-750 Organizational Development (3 cr.)**

Fall and Spring

Change agent skills for middle managers and external consultants to facilitate organizational health. Assessment, diagnosis, intervention, team building, and coaching of key organization personnel. Emphasis on practical methods for the development of various types of organizations.

Prerequisites: take INMGT-600 or INMGT-400.

**INMGT-765 Program Management** (3 cr.)

Fall and Summer

Planning, control and leadership of technical projects and programs. Justification, scheduling, risk management, cost analysis, resource management, program control, information technology, and multiple-project management.

**INMGT-790 Global Technology Management Practicum** (1 cr.)

Self-directed study of globalization and international technology management on the student's work assignments, organization, or profession.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: March 2010

## **ITC Instructional Technology Coordinator**

### **ITC-710 Introduction to Instructional Technology Coordinator Administration** (1 cr.)

Study of instructional technology coordinator responsibilities regarding the leadership, staffing, planning, financing, and issues surrounding the role within the PK-12 environment.

### **ITC-760 Instructional Technology Coordinator Administration** (3 cr.)

Theoretical and practical skills necessary to perform the role of instructional technology coordinator within the PK-12 setting.

Prerequisites: take ITC-710 and EDUC-726 and MEDIA-710.

### **ITC-790 Instructional Technology Coordinator Practicum** (2 cr.)

Experience in the role of an instructional technology coordinator at a selected public school district under the guidance of a mentor at the school site and a university supervisor.

Prerequisites: take ITC-710 and EDUC-726.

### **ITC-795 Instructional Technology Coordinator Internship** (4 cr.)

Advanced experience in the role of an instructional technology coordinator at a selected public school district under the guidance of a mentor at the school site and a university supervisor.

Prerequisites: take ITC-760 and ITC-790.

### **ITC-797 Field Experience** (1-3 cr.)

Field Experience

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**Back to [Course Descriptions](#)**

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The Graduate Bulletin

Reviewed: May 2008

## **ITM Information Technology Management**

### **ITM-508 Convergence Technologies (3 cr.)**

Spring

Creation of single networks that support many different types of traffic: data, audio, video, and interactive multimedia. Planning physical design and installation of a telephone and converged system, requirements of a converged network, and what makes convergence.

### **ITM-530 IP Telephony Design and Implementation (3 cr.)**

Internet Protocol (IP) Telephony components and protocols examination; converged network interpretation; analog and digital voice interface configuration; quality of service configuration; single and multi-site IP telephony deployment; IP telephony features implementation.

### **ITM-540 Cisco Networking Academy Program: Instructor Fast Track (2 cr.)**

Summer

Fast-track option to prepare the instructor for teaching in the Cisco Networking Academic Program, meeting requirements for the Cisco Certified Academic Instructor (CCAI). Instructor's consent required. Must be Cisco CCNA certified.

### **ITM-541 Cisco Networking Academy Program: Instructor I (4 cr.)**

First of four-course sequence preparing instructors for teaching in the Cisco Networking Academy Program, meeting requirements for the Cisco Certified Academic Instructor (CCAI), and preparing for the Cisco Certified Network Associate (CCNA) examination. Instructor's consent required.

### **ITM-542 Cisco Networking Academy Program: Instructor II (3 cr.)**

Second in a four-course sequence preparing instructors for teaching in the Cisco Networking Academy Program, meeting requirements for the Cisco Certified Academic Instructor (CCAI), and preparing for the Cisco Certified Network Associate (CCNA) examination.

Prerequisites: take ITM-541.

### **ITM-543 Cisco Networking Academy Program: Instructor III (2 cr.)**

Third in a four-course sequence preparing instructors for teaching in the Cisco Networking Academy Program, meeting requirements for the Cisco Certified Academic Instructor (CCAI), and preparing for the Cisco Certified Network Associate (CCNA) examination.

Prerequisites: take ITM-542.

### **ITM-544 Cisco Networking Academy Program: Instructor IV (2 cr.)**

Fourth in a four-course sequence preparing instructors for teaching in the Cisco Networking Academy Program, meeting requirements for the Cisco Certified Academic Instructor (CCAI), and preparing for the Cisco Certified Network Associate (CCNA) examination.

Prerequisites: take ITM-543.

**ITM-561 Workstation and Server (3 cr.)**

Installing, configuring, and administering Microsoft Windows utilizing the current commercial version of the product for both workstations and servers. Helps prepare students for two of the Microsoft Certified Systems Engineer (MCSE) certification examinations.

**ITM-562 Server Applications (3 cr.)**

Summer

Installing, configuring, and administering server applications using multiple industry standard operating systems. Server applications may include World Wide Web, FTP, software updates, mail, file sharing, DNS, DHCP, and terminal services.

Prerequisites: take ITM-561.

**ITM-563 Directory Services (3 cr.)**

Summer

Provides knowledge and skills to plan, implement, and troubleshoot directory services. Design and implement a secure network. Focuses on a directory services environment, including forest and domain structure, domain name system, site topology and replication, organizational unit structure, and delegation of administrations.

Prerequisites: take ITM-561.

**ITM-582 Network Systems Design (3 cr.)**

Spring

Concepts from communication networks. LAN, MAN, WAN networks. Introduction to LAN switching, ATM and virtual LANS. Designing and integration of LAN switching virtual networking and ATM into today's networks.

**ITM-583 Introduction To Network Security (3 cr.)**

Winterm, Summer

Design, implementation and management of network security in multilayered computer networks. Identifying and evaluating network security threats; internet, intranet, and extranet security issues. Must be Cisco CCNA certified.

**ITM-591 Wireless Systems (3 cr.)**

Spring

Wireless networking combining Radio Frequency (RF) and Local Area Networking (LAN) technology fundamentals. Basic concepts and building blocks or the convergence between RF and networking technologies. Technologies and tasks vital to installing, managing, and supporting wireless networks.

**ITM-641 Scalable Internetworks (3 cr.)**

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Students will learn how to build scalable routable networks. Students are required to pass the associated Cisco certification examination. Must be Cisco CCNA certified.

**ITM-642 Remote Access Networks (3 cr.)**

Fall and Spring

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Build remote access networks to interconnect central sites to branch offices and home offices. Students are required to pass the associated Cisco certification examination.

Prerequisites: take ITM-641.

**ITM-643 Multi-Layer Switched Networks (3 cr.)**

Fall and Spring

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Build multi-layer switched networks. Students are required to pass the associated Cisco certification examination.

Prerequisites: take ITM-641.

**ITM-644 Internetwork Troubleshooting (3 cr.)**

Fall and Spring

Specialization course for the Cisco CCNP professional certification. Students will learn to troubleshoot internetworks. Students are required to pass the associated Cisco certification examination.

Prerequisites: take ITM-641, ITM-642, and ITM-643.

**ITM-645 Internetwork Design (3 cr.)**

Fall and Spring

Specialization course for the Cisco CCNP professional certification. Students will learn to design internetwork solutions. Students are required to pass the associated Cisco certification examination.

Prerequisites: take ITM-641, ITM-642, and ITM-643.

**ITM-650 Enterprise Solutions and Unified Communications (3 cr.)**

Enterprise-level network utilizing the technologies and methods that are current industry best practices. Provide enterprise network solutions and unified communications to an organization while maintaining quality of service. New and emerging network technologies for an enterprise network.

Prerequisites: take ITM-530, ITM-563, and ITM-644.

**ITM-681 Telecommunications Systems Administration (3 cr.)**

Fall

Issues and concerns required to manage telecommunications networks and contemporary problems.

**ITM-684 Advanced Network Security and Auditing (3 cr.)**

Network infrastructure, operating systems, data centers, and virtualized environment security and auditing. Information technology government and industry regulation compliance.

Prerequisites: ITM-383, ITM-363, ITM-443

**ITM-690 Information Technology Management Capstone (3 cr.)**

Fall and Spring

Work with an outside organization in a team environment utilizing concepts of design, brainstorming, problem solving, team work, creativity, evaluation, and present findings in oral and written formats.

**ITM-715 Computer Networking Foundations (4 cr.)**

Fall, Spring and Summer

Network infrastructure management and integration. LAN/WAN routing, switching, security and maintenance.



### **ITM-798 Problems in Graphic/Telecommunications (2-6 cr.)**

Fall, Spring and Summer

Substantive study and activity for specialists in the graphic/telecommunications fields to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant in graphic/telecommunications.

Preparation of a technical report may be repeated for a maximum of six semester credits.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Reviewed: March 2010

## LIT Literature

### **LIT-502 Topics in Literature** (1 cr.)

Fall, Spring and Summer

Intensive analysis of selected authors and literary works with emphasis on discourse analysis in group and workshop settings. **R**

### **LIT-503 Coming of Age in Literature and Film** (3 cr.)

Fall, Spring and Summer

Exploration of literary and filmic works that treat age, coming of age, aging, and old age, including texts from American majority and minority cultures. Literary and critical analysis using age studies in literature.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Reviewed: May 2009

## **MBE Marketing & Business Education**

### **MBE-500 Introduction to Teaching Marketing and Business Education (3 cr.)**

A study of becoming a teacher in the disciplines of Marketing and Business Education with a deep focus on their related career and technical student organizations.

### **MBE-501 Methods and Strategies for Teaching Marketing (4 cr.)**

Fall

Marketing content structures, teaching and learning strategies and aids.

### **MBE-555 Marketing and Business Seminar (3 cr.)**

Issues and trends in marketing, business and career and technical education. Experiences necessary for success during student teaching and upon initial career entry. **R**

### **MBE-601 Marketing Education Curriculum (2-3 cr.)**

Fall

Program, course and lesson-level curriculum development skills. Assessment systems, strategies, design elements, and test development skills.

### **MBE-611 Business Education Methods and Curriculum (5 cr.)**

Teaching methods and curriculum design for business educators. Emphasis on basic business subjects; business literacy and entry-level job preparation; issues and trends; demonstration and development of a standards-based business education curriculum.

### **MBE-612 Elementary Keyboarding Teaching Methods (1 cr.)**

Developmentally appropriate methods of instruction in keyboarding and emerging input technologies applicable to elementary educational settings. Must be an Elementary Certified Educator.

### **MBE-701 Issues in Marketing and Business Education (2 cr.)**

Definition, exploration and research of a current issue in secondary or postsecondary Marketing and Business Education.

### **MBE-702 Improving Methods and Materials for Marketing and Business Education (2 cr.)**

Instructional materials and methods for utilization in secondary or postsecondary Marketing and Business Education.

### **MBE-799 Independent Study (1-3 cr.) **R****

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**Back to [Course Descriptions](#)**

---

Revised: March 2010

## **MECH Engineering Mechanics**

### **MECH-532 Mechanical Design (4 cr.)**

Analysis and design of machine elements: gearing bearings, shafting and friction devices.

### **MECH-537 Mechanical Design Drafting (2 cr.)**

Design of a machine, specifications, layout, calculations, bills of material, detail and assembly drawings.

### **MECH-592 Mechanics of Machinery I (3 cr.)**

Dynamics of machinery: rectilinear and curvilinear motion; translation and rotation of a rigid body, force-acceleration equation, impulse and momentum; work, power and energy; balancing and vibration.

### **MECH-593 Mechanics of Machinery II (3 cr.)**

Graphical analysis and synthesis of linkages, cams, gear trains, displacement, velocity, acceleration and dynamic forces.

### **MECH-729 Product Development and Design (3 cr.)**

Theory and application of the product development and design process. Principles of efficient engineering processes and management structures that support product design. Emphasis on structured approaches that insure constraints are properly defined and met. Includes major project.

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**Back to [Course Descriptions](#)**

---

## **MEDIA Media Technology**

### **MEDIA-505 Photo Processes (3 cr.)**

Fall, Spring and Summer

Advanced monochromatic photography: aesthetics, advanced theory, view-camera techniques, studio lighting, materials and equipment selection, sheet-film processing, specialized processes and techniques. \$

### **MEDIA-511 Advertising and Public Relations Photography (3 cr.)**

Fall, Spring and Summer

A survey of advertising and public relations photography trends and practices. The relationship between photography, typography and design, image capture, manipulation, file management, workflow, output, as well as identifying and meeting client needs and expectations are stressed. A digital SLR camera is required.

### **MEDIA-530 Video Production (3 cr.)**

Fall and Summer

A survey of digital audio and video production fundamentals with emphasis on workflow, digital capture, editing and manipulation and delivery alternatives.

### **MEDIA-535 Film-History and Appreciation (3 cr.)**

Fall

Evolution of motion picture film as medium of mass communication and aesthetic expression; contributions of noted film producers.

### **MEDIA-540 History of Photography (3 cr.)**

Spring

A survey of the scientific and aesthetic development of photography from its beginnings to the recent practices of photographic technologies in the context of post-modernity. This course will examine the diversity of styles, techniques, methods, and ideologies of selected photographers focusing on their contributions and influences in advertising, art, fashion, communication technology and pop culture.

### **MEDIA-560 Introduction To Media in Education and Training (2 cr.)**

Fall, Spring and Summer

Use of media in education and training. Includes the production of media and instructional materials in print, video, computer-bases and multimedia formats.

### **MEDIA-565 Integrated Software Applications For Instruction (3 cr.)**

Spring and Summer

Software applications for the professional and personal use of instructors. The effective use of word processing, spreadsheet, database, presentation, communication and other appropriate software applications with emphasis on curricular integration and professional standards.

### **MEDIA-566 Integrated Media Applications For Instruction (3 cr.)**

Prepares instructors to use various media in the learning environment. Emphasis on

proper curriculum integration based on sound curriculum design principles and professional standards. Instructor's consent required.

Prerequisites: take MEDIA-565.

**MEDIA-570 Computer-Assisted Interactive Video** (3 cr.)

Summer

Design, production and evaluation of interactive video applications. Analysis of various hardware and software systems. Instructor's consent required.

**MEDIA-575 Web Production and Distribution** (3 cr.)

Fall, Spring and Summer

Production and distribution of content to the World Wide Web (WWW). Consideration given to importance, types and purposes, advantages and disadvantages, production and distribution workflow, planning, use of various media elements and technologies for web production and distribution.

**MEDIA-600 Workshop** (1-3 cr.)

Fall, Spring and Summer

Special topics in media technology providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop. **R**

**MEDIA-611 Photojournalism and Documentary Photography** (3 cr.)

Fall

A survey of photojournalism and documentary trends and practices for editorial publication. The importance of the still photograph as a conveyor of information and influence on public opinion is emphasized. Ethical and moral considerations, freedom of press and the public's right to know are stressed. A digital SLR camera is required.

**MEDIA-612 Nature Photography** (3 cr.)

Fall, Spring and Summer

Fundamentals of conventional and digital photography, camera techniques, composition, aesthetics, exposure, and light in relation to animals, plants, water, weather and landscapes. Emphasis on appropriate photographic equipment and field techniques for nature photography. Student must provide an adjustable camera. **\$**

**MEDIA-630 Video/Cinema Practicum** (3 cr.)

Spring

Cross discipline teams explore selected topic(s) through the completion of professional level video/cinema project(s), from concept to distribution digital media.

Prerequisites: take MEDIA-530.

**MEDIA-640 Telecommunication Systems and Teleconferencing** (2 cr.)

Fall, Spring and Summer

Interactive teleconferencing techniques. Applications, effective utilization and cost-effectiveness of information distribution systems, including telephone, television, teletext, videotext, viewdata, cable TV, slow-scan TV, and computers. Survey of transmission systems, including telephone lines, satellites, coaxial cable, microwave and fiber optics.

**MEDIA-641 Fashion and Glamour Photography** (3 cr.)

Spring

A survey of fashion and glamour photography trends and practices for advertising and editorial publication. Emphasis is placed on studio and location lighting, working with

models, hair and make-up artists as wells as wardrobe and prop stylists. The importance of concept and design in creating effective images is stressed.

**MEDIA-651 Product Photography** (3 cr.)

Fall, Spring and Summer

Photography of natural and manufactured products for illustration, documentation, catalog and aesthetic purposes. Studio and field shooting, lighting for various product characteristics and locations, markets and market requirements, photographer-client relations, legal issues. 35mm single lens reflex, medium format, view or adjustable digital (3 megapixel minimum) camera required.

**MEDIA-695 Professional Portfolio Development** (3 cr.)

Spring

Capstone experience for the Applied Photography minor. Students fine tune their direction and concentrate on the area they intend to specialize in their professional career. Students design and produce a portfolio to be evaluated by representative professionals. Standards of professional practice are emphasized.

**MEDIA-710 Learning Technologies** (3 cr.)

Overview and selection criteria of instructor-led, computer-based, and distance learning systems for delivering content to trainees in the workplace. Includes the development of training materials in a variety of formats. Instructor's consent required. Computer literacy required.

Prerequisites: take MEDIA-560.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: April 2009



## **MFGE Manufacturing Engineering**

### **MFGE-551 Manufacturing Process Engineering I 3 cr.**

Understanding, analysis, and control of machining and metal forming processes. Emphasis is given to process characteristics of heat transfer, process forces and pressures, and machine tool dynamics. Sheet metal designs utilizing solid modeling software. Instructor's consent required.

### **MFGE-552 Manufacturing Process Engineering II 3 cr.**

Analysis of polymer and metal behavior in processing; mechanics of processing; identification of appropriate fabrication processes; diagnosis of process related problems; mathematical modeling of process designs.

### **MFGE-615 Machine Vision and Robotics 2 cr.**

Design of machine vision and industrial robotic applications, including cost justification.

### **MFGE-640 Manufacturing System Design and Simulation 3 cr.**

Design of manufacturing systems using contemporary methods and philosophies. Modeling and comparison of system designs using simulation software. Interpretation of experimental simulation results to evaluate system design alternatives. Preparation of technical reports summarizing projects. Instructor consent required.

### **MFGE-665 Reliability Engineering 3 cr.**

A practical introduction to reliability engineering with the opportunity for application. Topics covered include reliability need, calculations, predictions and modeling, and test design. Statistical proficiency required.

### **MFGE-690 Manufacturing System Design Problems 1-3 cr.**

Manufacturing system design through the application of previously learned principles and techniques. Issues to be addressed include: product design for manufacturability, process and tooling design and fabrication, system layout and equipment configuration, information and control architecture, implementation of quick-changeover strategies, task sequencing and scheduling, and simulation and evaluation of alternatives.

### **MFGE-707 Field Project Formulation (1 cr.)**

Critical reviews of manufacturing engineering field problems and analyses. Discuss, identify, and write a detailed, statistical, and realistic data collection method in preparation for the field problem.

Prerequisite: take INMGT-625

### **MFGE-735 Field Problem in Manufacturing Engineering 3 cr.**

Identification, selection and completion of a problem in manufacturing engineering culminating in a Plan B paper. Application of advanced manufacturing engineering topics. Admission into the M.S. in Manufacturing Engineering program and approval of research advisor required.

**MFGE-753 Polymer Engineering** 3 cr.

Advanced analysis of polymer behavior in processing; prediction of mechanical behavior; analysis of polymer failure; analysis of polymer electrical and optical properties.

Prerequisite: take MFGE-552 or consent of instructor.

**MFGE-771 Emerging Manufacturing Materials** 3 cr.

Theory and application of new and emerging materials in manufacturing. Principles of materials design and development. Properties and behavior of new and emerging materials and their enabling role in industry. Recommended: undergraduate coursework in chemistry and engineering materials.

**MFGE-792 Special Projects in Manufacturing Engineering** 2-6 cr.

Substantive study and activity for specialists in the industry and technology field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum of six semester credits.

Prerequisites: TECED-739.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: April 2010

## **MFGT Manufacturing Technology**

### **MFGT-503 Computer Aided Manufacturing (3 cr.)**

Justification for and application of computer assistance in manufacturing process; machine process control, inventory and materials handling, robotics and automated assembly, product design and part grouping in relation to total manufacturing operation.

### **MFGT-515 Metallurgy (3 cr.)**

Properties of crystalline solids, production of iron and steel, the carbon-iron equilibrium diagram, principles of heat treatment, properties of ferrous alloys. Production, properties, and theory of the most important non-ferrous metals and alloys.

### **MFGT-530 Plastics For Teachers (2 cr.)**

Overview of plastics as a manufacturing material. Focus on plastics processes: injection molding, blow molding, extrusion, thermoforming, and reinforced resin composites. Includes lab projects for the technology education classroom and tours to plastic processing industries.

### **MFGT-545 Design and Simulation of Manufacturing Systems (3 cr.)**

Design of manufacturing systems using contemporary methods and philosophies. Modeling and comparison of system designs using simulation software. Interpretation of experimental simulation results to evaluate system design alternatives. Preparation of technical reports summarizing projects. Statistical knowledge recommended.

### **MFGT-600 Workshop (1-3 cr.)**

Special topics manufacturing, providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop. **R**

### **MFGT-605 Industrial Robotics (3 cr.)**

Specifications, planning, purchasing decisions, and programming of industrial robots. Instructor's consent required.

### **MFGT-792 Special Projects in Manufacturing Technology (2-6 cr.)**

Substantive study and activity for specialists in the industry and technology field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum of six semester credits.

Prerequisites: take TECED-739

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**Back to [Course Descriptions](#)**

---

Revised: July 2008

## **MFT Marriage and Family Therapy**

### **MFT-666 Alcoholism and Family Systems Intervention** (2 cr.)

The role of alcoholism in the family and how to intervene therapeutically.

### **MFT-735 Investigations**(2 cr.)

A research experience which culminates in a Plan B paper. Consent of Program Director.

Prerequisites: take EDUC-740 or MFT-765. \$

### **MFT-740 Cultural Competence in Family Therapy** (3 cr.)

Spring

Cultural competence and its application in MFT. Exploration of systems of privilege and oppression and their link to interpersonal dynamics. Self-examination of cultural assumptions. Practice in working with difference.

Prerequisite: take ANTH-620

### **MFT-744 Psychometric Aids in Couples and Family Therapy** (2 cr)

Spring

Understanding and applying psychometric instruments in MFT context. Includes descriptive statistics, reliability, measurement error, validity, interpretation, selection, administration, cultural diversity, disabilities.

### **MFT-745 Treating Drug Abuse, Intimate Violence and Self Harm** (3 cr)

Fall

Assess and treat intimate violence (emotional, physical, sexual, neglect), substance abuse and self harm. Children, adolescents, adults, couples and families.

### **MFT-750 Foundations of Couples and Family Therapy** (3 cr.)

Study of early theories of marriage and family therapy. Assessment and treatment for children, adolescents, adults, couples, parents and families.

### **MFT-751 Contemporary Couples and Family Therapy** (3 cr.)

Study of contemporary theories of marriage and family therapy. Assessment and treatment for children, adolescents, adults, couples, parents and families.

### **MFT-752 Couples Therapy and Sex Therapy** (3 cr)

Therapeutic models, assessment and interventions for working with couples. Dynamics of couple relationships including communication, infidelity, emotional regulation, conflict management, and sexual interaction.

### **MFT-755 Professional Issues in Couples and Family Therapy** (3 cr.)

Spring

Exploration of the issues in the development of professional skills, attitudes and identity in the area of marriage and family therapy. Prerequisites: take MFT-750.

**MFT-760 Sex Therapy Seminar (2 cr.)**

This course is offered to graduate students, who have already taken a basic course in human sexuality and who plan to work in the helping professions. Its main goal is to provide participants with the basic skills, knowledge and attitudes that will enable them to help clients solve problems related to sexuality. Instructor's consent required.

**MFT-765 Research in Psychotherapy (3 cr.)**

Fall and Spring

Basic research methods in the evaluation of therapy effectiveness. Application of research skills by demonstrating ability to critique published studies and to develop a research proposal.

**MFT-793 Couples and Family Therapy Practicum I (4 cr.)**

Fall

Preparation for professional couple and family therapy services through seminar discussions, observation, and supervised therapy experience. Admission to MS in Marriage and Family Therapy program and MFT program director consent required.

**MFT-794 Couples and Family Therapy Practicum II (4 cr.)**

Spring

Sequel to MFT-793. Continuing preparation for professional couple and family therapy services through seminar discussions, observation, and supervised therapy. MFT program director consent.

Prerequisites: take MFT-793.

**MFT-795 Couples and Family Therapy Practicum (3 cr.)**

Summer

Preparation for professional couple and family therapy services through seminar discussions, observation, and supervised therapy. MFT Program Director consent.

**MFT-799 Independent Study (1-3 cr.) R**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: May 2009

## **MSCS** Mathematics, Statistics and Computer Science

### **MSCS-590 Topics 1-3 cr.**

Topics of current importance in applications of mathematics to problems in business, industry, government or society. May be repeated for additional credit with consent of program director. **R**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: June 2004

# PHOTO Photography

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**Back to [Course Descriptions](#)**

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The Graduate Bulletin  
Reviewed: March 2010



## **PHYS   Physics**

### **PHYS-530 Science and the Fallible Mind For Educators   (2 cr.)**

Cross-disciplinary, physical science course primarily intended for educators. Defines and examines science with a perspective on societal issues related to the human mind, consumer marketing, psychology, religion, risk and fear, global concerns, and the use and abuse of numbers. H.S. Algebra.

### **PHYS-596 Topics in Astronomy for Elementary Teachers (2 cr.)**

Build confidence and curriculum for in-service teachers when teaching select topics in astronomy and geology at the elementary level.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: April 2009

## **PKG Packaging**

### **PKG-535 Packaging Machinery (3 cr.)**

Weighing, forming, filling, sealing, cartoning, capping, labeling, wrapping, casing, uncasing, palletizing/depalletizing machines as applies to the functional capabilities of speed, materials, containers, and operating functions.

### **PKG-690 Packaging Development (3 cr.)**

Applications of packaging functions: developing a product's complete packaging system, from final production of product to consumer.

### **PKG-695 Packaging Seminar (2 cr.)**

Current packaging problems or developments (subject based on students' interests and current issues).

### **PKG-740 Food Packaging Laboratory (3 cr.)**

Solve complex and interrelated problems in food packaging research/development through understanding of the interrelationship of food and packaging and laboratory testing methods.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: July 2008

## **POWER Power**

### **POWER-595 Seminar 1-2 cr.**

Specific content is designed to upgrade competencies of participants. Content will change to reflect current state of the art in electricity/electronics or power mechanics. **R**

### **POWER-792 Special Projects in Power 2-6 cr.**

Substantive study and activity for specialists in the power field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant in power technology. Preparation of a technical report. May be repeated for a maximum of six semester credits.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: July 2008

## **PSYC Psychology**

### **PSYC-520 Psychology: Its History and Systems (3 cr.)**

Fall, Spring and Summer

History of psychology and influence of early competing schools of thought: structuralism, functionalism, behaviorism, Gestalt psychology, and psychodynamic psychology. Evolution to present as a diverse behavioral science with emphasis on neobehaviorism, humanistic psychology, and cognitive psychology.

### **PSYC-530 Psychology of Learning (3 cr.)**

Fall

A course designed to acquaint the student with the principles of learning drawn from experimental and theoretical psychology. These principles are demonstrated as they apply to animal and human learning. Modern viewpoints toward theories of learning are emphasized.

### **PSYC-535 Motivation and Emotion (3 cr.)**

Fall, Spring and Summer

An experimentally oriented introduction to the fundamental principles of motivation and emotion.

### **PSYC-540 Psychology of Individual and Group Differences (3 cr.)**

Fall

Nature and extent of differences if individuals and groups are studied. Intelligence, achievement, aptitudes, interests, attitudes, and general personality are the major differences included. Race, sex, nationality, social class and age in relation to individual differences are studied.

### **PSYC-551 Children's Social Reasoning (3 cr.)**

Fall and Spring

Focused, in-depth study of social reasoning from birth through late childhood. Empathy, friendship, altruism, multicultural perceptions, shyness, assertiveness, aggression, loneliness, morality, values, and global responsibility. Heredity/environment-based theories. Assessment tools and prevention and intervention programs.

### **PSYC-552 Adolescent Psychology (3 cr.)**

Fall, Spring and Summer

The physical, emotional, social, moral, and intellectual development of secondary school youth.

### **PSYC-561 Abnormal Psychology (3 cr.)**

Fall, Spring and Summer

A study of more serious mental disturbances. Emphasis on the growing importance of mental disorders and on their early detection and referral is studied.

**PSYC-570 Interpersonal Effectiveness Training (2 cr.)**

Fall, Spring and Summer

Training in effective interpersonal communication attitudes and skills for creating healthy relationships including self-awareness/self-expression, understanding others' communication, assertive rights/responsibilities, dealing with difficult emotions, conflict management/resolution and mediation, collaborative problem solving and teamwork, and gender differences in communication style.

**PSYC-571 Introduction To Health Psychology (3 cr.)**

Fall

Principles of psychology applied to the promotion of health and wellness; prevention of disease, injury and premature death; psychological treatment of illness; improvement of health care; and formation of health policies.

**PSYC-575 The Psychology of Marriage and the Family (2 cr.)**

Fall

A study of the interpersonal relations involved in dating, mating and family collaboration with growing awareness of patterns for self-integration.

**PSYC-577 Consumer Psychology (3 cr.)**

Fall

Psychological principles and theories from the areas of motivation, perception, learning, attitude, information processing, personality, groups, organizational psychology, and environmental psychology are applied to the understanding of consumer behavior, consumer problems, and their solution.

**PSYC-579 Public Relations (2 cr.)**

Fall, Spring and Summer

Introduction to public relations in industry and education including community relations, employee relations, customer relations, media relations, tools of public relations, two-way communications, and special publics.

**PSYC-582 Human Resource Management (3 cr.)**

Fall, Spring and Summer

Organization and coordination of personnel practices and methods. Consideration given to communication, employment, orientation and training, working conditions, supervision, performance evaluation, collective bargaining, salary administration, health and recreation.

**PSYC-591 Applied Psychophysiological Methods (3 cr.)**

Fall

Theory, methods, laboratory procedures, and applications of physiological responses to psychological stimuli.

**PSYC-601 Workshop: Special Topics in Psychology (1-3 cr.)**

Current specialized topics studied in a small group setting utilizing experimental activities.

**R**

**PSYC-603 Management of Employee Reward Systems (3 cr.)**

Fall, Spring and Summer

Review of issues in the reward and compensation of employees and of systematic methods for the determination of employee wages, incentives and benefits. Psychological theories of motivation, external equity, job analysis, identifying compensable factors used in job

evaluation, comparable worth and performance appraisal, individual salary determination.

**PSYC-632 Perception (3 cr.)**

Fall

This course serves as an introduction to human perception. The content of the course is structured around an information processing model, with the sensory and memory facilities considered as information systems. The student will analyze perceptual research, become familiar with classical and modern psychophysical techniques and conduct experimentation in human information processing.

**PSYC-642 Cognitive Processes (3 cr.)**

Spring

Cognitive theories of attention, memory, language, reasoning and problem solving with applications to fields of education, vocational rehabilitation, gerontology, forensic, clinical and counseling psychology.

**PSYC-655 Myers-Briggs Type Indicator (3 cr.)**

Principles of Carl Jung's theory of psychological type are explored with the Myers-Briggs Type Indicator (MBTI). Applications in personal, interpersonal and organizational development; teaching/training and learning styles; collaborative problem solving; conflict; stress and time management.

**PSYC-675 Right Brain (2 cr.)**

Spring and Summer

The two hemispheres of the human brain. Exploration and experience in right hemisphere modes of consciousness, through techniques such as meditation, hypnosis, drawing, guided imagery and dreaming.

**PSYC-685 Recruitment and Selection of Human Resources (3 cr.)**

Fall, Spring and Summer

In-depth examination of the processes involved in the design and implementation of procedures for selecting employees; the impact these procedures have on the organization; and recruitment, job analysis, testing methods, legal issues, selection strategies, career development.

**PSYC-690 Psychological Measurement (3 cr.)**

Spring

An introduction to the assumptions, models and applications of measurement techniques in behavioral science. Test analysis, item analysis, reliability, and validity are extensively covered. The course also introduces the student to prediction and measurement of attitudes and opinions.

**PSYC-693 Field Practicum in Public Relations Specialization (1-3 cr.)**

Fall, Spring and Summer

Opportunity to apply public relations principles in a practical setting. All coursework for the public relations specialization must be completed prior to the practicum that serves as a capstone for the specialization. Both setting and job description must be approved by the faculty supervisor. **R**

**PSYC-701 Seminar On Diversity in the Workplace (1 cr.)**

Spring

Application of problem solving skills and strategies to issues regarding diversity in the context of applied psychology.

**PSYC-702 Ethics in Applied Psychology (1 cr.)**

Fall

Ethical principles and codes of conduct for psychologists, with application to worksettings encountered by applied psychologists. Consideration to ethical codes of conduct in various professions, and the role of culture, personality and social factors, and major life events in conceptualizing ethical standards.

**PSYC-707 Applied Social Psychology (3 cr.)**

Fall

Principles and methods derived from social psychology applied to problems and issues in a variety of settings.

**PSYC-708 Psychosocial Intervention (3 cr.)**

Spring

Theories and methods of planned change. Training of effective change agents.

**PSYC-710 Applied Psychology Seminar (1-3 cr.)**

Fall

Current issues in applied psychology as they interrelate with content and skills in the areas of I/O psychology, program evaluation, and health psychology. Independent or group research involving problem identification, review of literature, compilation of bibliography, plan of methods, conduct of research, interpretation of findings, and preparation of the final paper according to APA standards and presentation of report. Instructor's consent required.

**PSYC-750 Principles of Program Evaluation I (3 cr.)**

Fall

Examination of program evaluation processes with an emphasis on quantitative research methods. Examines the historical, ethical, and political nature of program evaluation. Skill development in evaluability assessments, evaluation design, data collection and analysis, contracting, ethics and communication of evaluation findings. Corequisite courses: PSYC-790.

**PSYC-751 Principles of Program Evaluation II (3 cr.)**

Advanced program evaluation skills and practices building on Principles of Program Evaluation I. Further examines evaluation theory, evaluation design, data collection, data analysis, and communicating evaluation findings. Introduces advanced quantitative and fundamental qualitative techniques utilized in conducting a supervised field evaluation project.

Prerequisites: take PSYC-750, PSYC-790.

**PSYC-752 Practicum in Program Evaluation (2 cr.)**

Fall Preparation for professional program evaluation service through seminar discussion, presentations, and observation of evaluation practices in conjunction with a supervised field experience. Emphasis on developing the students' ability to independently negotiate, design, conduct and report evaluation projects.

Prerequisites: take PSYC-751.

**PSYC-765 Psychology of the Adult Learner (2 cr.)**

Application of contemporary perspectives in adult psychology to adult learners, primarily in employment settings. Specific strategies for trainers of adult learners, with consideration of gender, cultural, and racial factors. Group and individual differences, organizational dynamics, motivational factors, and disabilities are addressed.

**PSYC-771 Advanced Health Psychology (4 cr.)**

Fall

Theoretical and applied issues related to the psychology of health, focused around five broad areas: the biological, social, psychological basis of health and disease; health policy; and health assessment and intervention. An ecological perspective will be provided for an integrative understanding of health and disease from a multi-dimensional standpoint.

**PSYC-781 Advanced Industrial Psychology (3 cr.)**

Fall

Topics of research and applications in industrial/organizational psychology ranging from issues of personnel selection and assessment to more macro issues of organizational design and behavior. Applications of social and differential psychology in industry consistent with recent behavioral science research and applications. Instructor's consent required.

**PSYC-790 Applied Research Design in Psychology (3 cr.)**

Fall

Intermediate level assessment of research designs to solve applied problems in psychology. Critical analysis of the problem, development of a conceptual framework, negotiation of research purposes, selection of designs and data analysis methods. Includes computer applications, hypothesis testing, and interpretation. Instructor's consent required.

**PSYC-791 Research For Decision Making (3 cr.)**

Spring

Collection, processing, analysis, interpretation, presentation, and dissemination of applied research for making organizational decisions.

**PSYC-835 Applied Psychology Field Problem(1-4 cr.)**

The investigation of a problem designed to include the planning, implementation and the evaluation of a feasible solution in an applied setting. (Repeatable up to 4 credits.)

Advanced standing in the MS in Applied Psychology program. **R\$**

**PSYC-871 Applied Health Psychology (3 cr.)**

Research and health promotion applications of health psychology: health-care outcome assessment, epidemiology, health status measurement, and development of health-promotion

and prevention programs. Analog experiential opportunities provided. Current professional issues in applied health psychology research and health promotion/ prevention.

Prerequisites: take PSYC-771.

**PSYC-875 Psychoeducational Intervention Practicum (3 cr.)**

Fall

Psychoeducational intervention strategies for promoting healthy individuals, families, organizations and communities. Designing, implementing, and evaluating psychoeducational learning experiences.

Prerequisites: take PSYC-708, PSYC-771, PSYC-871.



**PSYC-890 Applied Psychology Internship** (1-5 cr.)

Supervised field experience in an applied psychology role involving the practice and integration of professional skills and knowledge developed in other courses. (Repeatable up to 5 credits.) Consent of program director. Advanced standing in the MS in Applied Psychology program. **R**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: September 2009

## **RC Risk Control**

### **RC-501 Seminar (1-2 cr.)**

Structured analysis of regulatory and curricular issues with which traffic safety educators should be conversant. **R**

### **RC-571 Alcohol, Drugs and Accident Prevention (3 cr.)**

Impact of alcohol and drug use on accident prevention programs; current efforts to rehabilitate alcohol and drug abusers.

### **RC-572 Behavior Approach to Accident Prevention (3 cr.)**

Behavioral aspects of accident prevention from physiological, psychological, sociological and cultural perspectives; identifying, understanding and modifying attitudes and behavior.

### **RC-581 Principles of Occupational Risk Control/Safety (2-3 cr.)**

Fall, Spring and Summer

An introduction to risk control/safety approaches which are intended to protect employee, property, legal, environmental, and financial-based assets through the development of internal practices/standards which promote the systematic anticipation, identification, analysis and control of risks that are inherent to the operation..

### **RC-583 Occupational Safety Health and Environmental Standards (3 cr.)**

Fall and Spring

Understanding and proper application of a range of regulations and standards relating to occupational and environmental safety and health.

### **RC-586 Fire Protection (2 cr.)**

Spring

Behavior of fire: chemistry, protection, prevention and control.

### **RC-587 Human Factors Engineering/Ergonomics (3 cr.)**

Fall

Physiological and psychological abilities in human/machine interface, working performance, reliability, comfort and safety; effective design of people and work environment as a cybernetic system.

### **RC-588 Construction Safety (3 cr.)**

Fall and Spring

Analysis of hazards, control procedures and systems related to typical construction equipment, tools and materials safety problems.

### **RC-589 Fleet Risk Control Management (3 cr.)**

Spring

Overview of logistically-oriented management systems required to control risk in fleet operations including internal standards development/analysis, emergency response, accident analysis, loss benchmarking, driver selection and training, vehicle operation, substance abuse testing, hours of service, vehicle maintenance/ inspection, route planning, cargo/personnel security, hazardous materials transportation, and regulatory

controls.

**RC-592 Construction Risk Management (3 cr.)**

Fall

Analysis and application of fundamental process steps for construction job site risk management.

**RC-595 Emergency Preparedness and Response (3 cr.)**

Spring

Specific emergency response plans that meet federal, state and local regulations.

**RC-640 Environmental Leadership and Sustainability Management (3 cr.)**

Analysis and evaluation of topics related to environmental leadership and sustainability management. Environmental and sustainability issues and management challenges will be explored to promote cost-effective management strategies.

P: RC-583

**RC-725 Process Hazard Management (3 cr.)**

Fall

Understanding and proper application of various process hazard management techniques. Identify hazards, assess their risk frequency and severity; define countermeasures (mitigation and elimination).

**RC-735 Field Problem in Risk Control(2-4 cr.)**

Fall, Spring and Summer

An operational experience which requires identification of a technical and/or administrative problem in an occupational setting. The problem is researched, analyzed for alternative operational countermeasures, and field tested to determine the effectiveness of the solutions. \$

**RC-781 Risk Management Applications (3 cr.)**

Fall

A broad spectrum of risk management topics, including the risk management process, risk assessment, and several alternative risk transfer techniques.

**RC-782 Loss Control Systems (3 cr.)**

Spring

In-depth investigation, application and evaluation of current managerial practices, which are specifically and uniquely related to managing loss/risk control processes and systems.

**RC-784 Internship-Risk Control (2-4 cr.)**

Fall, Spring and Summer

Full-time, supervised work and learning experience in an appropriate professional setting.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: June 2010

## RD Design, Research and Development

### **RD-520 Prototype Development and Model Making (3 cr.)**

Introduction to model making and prototype development/construction. Competencies are developed in converting design, research and development and other creative ideas into three-dimensional objects using traditional and nontraditional machining and forming techniques. Three-dimensional design form the core of this course.

### **RD-620 Research and Development (2 cr.)**

Research and development procedures applied to specific industrial material and processing problems. Corequisite: RD-621

### **RD-621 Research and Development Laboratory (1 cr.)**

This lab is taken in conjunction with RD-620 to allow students in technical majors to fulfill the requirements of the major research and design project.  
Corequisite: RD-620.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: January 2009

## **RDGED Reading Education**

### **RDGED-701 Developmental Reading K-12** 3 cr.

Concepts, methods, research, and historical developments that form the foundations of teaching reading. Pedagogical considerations, including general conditions for learning to read and write; developmental phases of reading; principles of good reading instruction; development of a personal philosophy about teaching reading as a reflective practitioner.

### **RDGED-702 Reading in the Content Areas K-12** 3 cr.

Research-based teaching methods, study strategies, and technology focusing on the abilities to use language processes (*reading, writing, speaking, listening*) to learn subject matter across the curriculum. Consideration will be given to individual differences among readers in relationship to the cultural and political aspects of content literacy.

### **RDGED-703 Children's Literature in the Reading Program** 3 cr.

Evaluation, selection, and teaching of literature in the elementary school language arts program with a focus on historically significant books, authors and illustrators writing for today's young readers.

### **RDGED-704 Young Adult Literature in the Reading Program** 3 cr.

Designing strategies to build an appreciation of literature, motivating life-long readers, and using literature to encourage critical thinking across the curriculum. Topics include the nature of teen-age readers, genres of young adult literature, and its use in classroom curriculum.

### **RDGED-705 Instructional Techniques:**

#### **Students With Reading Difficulties** 3 cr.

Integration of psycholinguistic theory into an interactive strategic model of remedial interventions based on the foundational research of literacy acquisition in a community environment. Integrating reading, writing and spelling into an effective and viable program for struggling readers and special populations, including the learning disabled.

### **RDGED-706 Assessment and Evaluation of Language and Reading Development** 3 cr.

Interrelationship of assessment and evaluation to literacy development including current research in reading and language arts practices. Selection, administration and interpretation of formative and summative literacy assessments for the purpose of evaluating reading and language processes.

### **RDGED-707 Reading Teacher Practicum** 3 cr.

Practicum in teaching individual students, grades 1-12, with reading difficulties. Assessment of the reader's strengths and needs is followed by the implementation of individualized instruction designed to assist the child to become a better reader.

### **RDGED-720 Guiding and Directing Reading Programs** 3 cr.

Organization, administration, and supervision of reading programs (Pre-K through 12).

Examine roles of reading personnel, evaluate existing literacy programs, and determine procedures to improve reading achievement. Methods for guiding classroom teachers to develop and implement literacy curricula through advisement and professional development.

Pass Benchmark I of the Reading Specialist Program.

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**Back to [Course Descriptions](#)**

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The Graduate Bulletin

Revised: March 2010

## **REHAB Vocational Rehabilitation**

### **REHAB-500 Special Topics in Rehabilitation 1-2 cr.**

Special topics not available through regular courses. Instructor's consent required. R

### **REHAB-500G Grantsmanship in the Helping Professions 1-2 cr.**

Summer Session

Explore grant writing in human service occupations and the necessity for such proposals as an element of change in society. Methods used to seek funding sources and evaluate requests for proposals.

### **REHAB-500M Psychophysiological Approaches to Chronic Muscle Problems in Community-Based Rehabilitation Services 1 cr.**

To enable individuals to develop skills in several psychological and somatic treatments for problems of chronic muscle tension in athletic settings. \$

### **REHAB-500N Community-Based Rehabilitation Services 1 cr.**

An examination of national priorities for community-based services designed to enhance competitive employment options for severely disabled persons.

### **REHAB-505 Sign Language I 3 cr.**

Fall Semester

Basic course in manual communication with persons who are deaf. Intensive practice in expressive and receptive communication.

### **REHAB-506 Sign Language II 3 cr.**

Spring Semester

Intermediate course in manual communication with persons who are deaf. American Sign Language, increasing sign vocabulary and communication speed.

Prerequisites: take REHAB-505.

### **REHAB-520 Rehabilitation and Chemical Dependency 3 cr.**

Spring Semester

Chemical use and abuse with emphasis on the rehabilitation of persons who are chemically dependent and the historical and sociological implications of drug usage.

### **REHAB-521 Rehabilitation of Public Offenders 3 cr.**

Fall Semester

Emphasis on programs designed to rehabilitate persons who are public offenders and sociological issues connected with the judicial system.

### **REHAB-527 Psychiatric Rehabilitation 3 cr.**

Fall Semester

Goals and processes of psychiatric rehabilitation. Knowledge and application of skills for integrating diagnosis into planning and intervention with a focus on rehabilitation services for individuals with long-

term mental illness in community-based settings.

### **REHAB-533 Adolescent Substance Use and Abuse 2 cr.**

Summer Session

Major concepts, current trends, and culturally sensitive approaches in the assessment, prevention and treatment of adolescent alcohol and drug addiction.

### **REHAB-550 Independent Living 2 cr.**

Fall Semester

An overview of independent living programs in this country including evolution, goals, methods of service delivery, and management of the independent living program.

### **REHAB-555 Rehabilitation of the Older Disabled Worker 2 cr.**

Develop awareness and understanding of older disabled workers with a focus on implementing rehabilitation planning that enables continued participation in the work force or reinsertion into it following disability.

### **REHAB-560 Assistive Technology 2 cr.**

Fall and Spring Semester

Provision of technology to enhance the lives of persons with disabilities. Delivery system, legislation, and issues related to funding are examined. Specific applications in communication, computers, mobility, and workstations and other technologies are reviewed.

### **REHAB-565 Laboratory in Rehabilitation Technology 2 cr.**

Spring Semester

Experience utilizing technological aids/devices developed for persons with disabilities. Modify/adapt equipment to meet specific functional requirements. Construct switch/control mechanisms for equipment. Develop prototype solutions to vocational and independent living problems..

### **REHAB-602 Management of Non-Profit Organizations 3 cr.**

Spring Semester

Principles and practices in the operation of non-profit organizations. Comparison of how non-profit and for-profit operations are affected by organizational structures and authority, budgeting practices, sources of income, personnel issues, strategic planning and program evaluation, and marketing. Application to community agencies.

### **REHAB-620 Psychological Testing People With Exceptional Needs 2-3 cr.**

Fall, Spring and Summer Semesters

Use of common psychometric tests with specific emphasis on selection, evaluation, administration, scoring, and interpretation of standardized tests for individuals who are disabled, including those from various ethnic and cultural groups.

### **REHAB-659 Workforce Development, Disability, and Socioeconomics 3 cr.**

Macro/micro influences that keep people unemployed and underemployed, including community, services, providers, employers, and families. Interface among legislative initiatives, disability, and life/work. Policy, strategies, and skills that promote effective intervention and change. Intended for professionals in the field.



### **REHAB-660 Rehabilitation in the Private Sector 3 cr.**

Spring Semester

Case coordination to support maximum medical recovery and/or vocational rehabilitation of an injured person involved in insurance funded cases. Differences between public and private rehabilitation processes. Interviewing, planning, assessing transferable skills, placing in suitable work, and communicating with other involved individuals. Business practices, professional roles, and ethical issues.

### **REHAB-661 Forensics For the Human Service Professional 2 cr.**

Spring Semester

Terminology and practices associated with forensics for human service professionals. Strategies and materials related to preparation for testimony and expert witness testimony in a court of law and other legal settings.

### **REHAB-662 Absence Management 3 cr.**

Fall Semester

Orientation to workers with disabilities in business and industry. Focus is upon the elimination of attitudinal and environmental barriers as they pertain to hiring, productivity, and retention of workers with disabilities. Governmental requirements, linkage between business, community resources, and rehabilitation.

### **REHAB-670 Work Adjustment Services 2-3 cr.**

Fall and Summer Semester

Principles and procedures of adjustment services. Emphasis upon the change and improvement of behavior. Supervised practical experience in interviewing, behavior observation, individual work adjustment planning, lesson plan and report writing.

### **REHAB-681 Application of Theories in Rehabilitation Counseling 3 cr.**

Major theories and techniques used in rehabilitation counseling. Development of skills in the use of basic counseling techniques with individuals who are disabled and including those from various ethnic and cultural groups.

### **REHAB-682 Sexuality and Disability 2 cr.**

Investigate sexuality as an integral part of the disability experience. Explore programs, techniques and personal biases in relation to sexuality of persons with disabilities.

### **REHAB-683 Vocational Counseling Issues 2 cr.**

Summer Session

Theoretical and applied approaches to vocational counseling and current research in vocational choice and career development as related to vocational counseling.

### **REHAB-688 Developing Collaborative Partnerships 3 cr.**

Fall Semester

Development of professional relationships that are characterized by collaboration and respect for the consumer or student. Role of team members including human service professionals, consumer student, family members, school personnel, and community organization staff in collaborative decision making. Enhanced service delivery responsiveness through application of collaborative principles.

### **REHAB-700 Seminar--Vocational Rehabilitation 1-2 cr.**

A seminar course devoted to the field of vocational rehabilitation and subject materials pertinent to the

field.

### **REHAB-701 Foundations of Rehabilitation 3 cr.**

Fall Semester

Foundations of rehabilitation including its philosophical foundation, historical development, organization; professional roles, responsibilities, and practices; and future trends.

### **REHAB-705 Practicum in Rehabilitation Leadership 3 cr.**

Practical experience in leadership within rehabilitation organizations. Leaders' roles may be demonstrated through experiences in fiscal management, human resource management, strategic planning, staff development, contract negotiations and production management.

### **REHAB-707 Practicum in Vocational Evaluation 4 cr.**

Fall Semester

A supervised experience that integrates vocational evaluation course material. The student will plan, conduct and communicate findings of comprehensive vocational evaluations with consumers who are disabled.

Prerequisites: take REHAB-620, REHAB-717, REHAB-723, REHAB-724; minimum grade B.

### **REHAB-708 Practicum in Rehabilitation Counseling 3 cr.**

150 hours of supervised clinical experience in a rehabilitation setting. The student will perform entry-level duties of a rehabilitation counselor.

Prerequisites: take COUN-750; minimum grade B.

### **REHAB-710 Rehabilitation Implications of Sensory Impairment 3 cr.**

Summer

Medical, psychosocial, and vocational implications of sensory disabilities. Disabling conditions affecting all five senses, with particular emphasis on hearing and visual impairments.

### **REHAB-713 Aspects of Disability: Physical Disabilities 3 cr.**

Fall Semester

Study of major physical disabilities including medical aspects and the psycho-social and vocational implications. Will cover the existence, onset, severity, progression and expected duration of disabilities. Minimum grade B.

### **REHAB-714 Aspects of Disability: Cognitive 3 cr.**

Spring Semester

Major cognitive and psychiatric disabilities and their medical, psycho-social, and vocational implications. Incidence, onset, severity, progression and expected duration mental retardation, learning disability, mental illness, brain injury and disease. Minimum grade B.

### **REHAB-715 Research in Rehabilitation and Counseling 3 cr.**

Fall

Basic research methods and design used to determine the effectiveness of rehabilitation services and outcomes. Statistical techniques, research terminology and design, ethical and legal implications of human subjects' research in quantitative and qualitative research applications. Critically analyze research and skill application through development of a practice-related research proposal.

### **REHAB-717 Occupational Analysis and Job Placement 3 cr.**

Fall Semester

Application of occupational analysis, career information, and placement concepts to the practice of job placement of persons with a disability. Includes job development/search techniques and the nature and critical impacting factors of the placement process.

### **REHAB-723 Procedures of Vocational Evaluation 3 cr.**

Spring Semester

Basic philosophies, practices, and processes of vocational evaluation applied to individuals with disabilities. Knowledge of specific assessment tools/instruments and application of clinical skills needed to analyze relevant information for program and career planning, identify significant behaviors, interpret findings to others and communicate assessment result.

### **REHAB-724 Laboratory in Vocational Evaluation 3 cr.**

Spring Semester

Application of the procedures and utilization of the tools of vocational evaluation including interviews, individual evaluation plans, standardized tests, vocational counseling, work samples, situational assessments, work-related behavioral observations. Interpret and communicate findings in a comprehensive vocational evaluation report. Minimum grade B

Co-requisite courses: REHAB-723. .

### **REHAB-735 Problems in Vocational Rehabilitation 2 cr.**

Identification, selection, and completion of a problem in vocational rehabilitation. The problem project will culminate in a Plan B paper. Intervention focusing on the family as the consumer of rehabilitation services.

Prerequisites: take EDUC-740. \$

### **REHAB-764 Case Coordination 3 cr.**

Fall Semester

Concepts and philosophy of the case coordination in rehabilitation applied to various employment settings. Integration of consumer case study data, identification of service need and plan development.

Prerequisites: take REHAB-713 REHAB-714.

### **REHAB-770 Thesis -- Vocational Rehabilitation 2-6 cr.**

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of six. Consent of Program Director.

Prerequisites: take EDUC-740. R \$

### **REHAB-780 Leadership and Management in Vocational Rehabilitation 2 cr.**

Leadership theories and rehabilitation organization concepts emphasizing continual skill building of leaders. Roles and responsibilities of leadership in promoting quality of business practices and partnerships. Response to system change, public policy, emerging trends, and ethical principles.

Admission to MS Vocational Rehabilitation.

### **REHAB-783 Internship in Vocational Evaluation 6 cr.**

A culminating practical experience using the tools and techniques of vocational evaluation to perform tasks of interviewing, planning, counseling, administering assessment tasks, observing, and reporting. Must be M.S. Degree Candidate.

Prerequisites: take REHAB-707; minimum grade B.

### **REHAB-785 Internship in Rehabilitation Leadership 6 cr.**

Fall, Spring and Summer Semesters

A culminating practical experience in providing leadership to accomplish organizational goals. Tasks in fiscal, personnel, program development, fund raising, production, marketing, and contract procurement. Must be a M.S. degree candidate. Must be M.S. Degree Candidate.

Prerequisites: take REHAB-705; minimum grade B.

### **REHAB-787 Internship in Rehabilitation Counseling 6 cr.**

Fall, Spring and Summer Semester

Culminating practical experience in rehabilitation counseling performing tasks from intake to discharge and/or placement. Application of history, philosophy, and structure of rehabilitation delivery systems; counseling to individuals, groups, and/or families; vocational and career development; assessment, planning and case management; and job development, placement, and retention. Must be M.S. Degree Candidate.

Prerequisites: take COUN-788 or REHAB-708; minimum grade B. R

### **REHAB-798 Field Experience in Rehabilitation 1-2 cr.**

Off-campus work and study in an approved position to better understand the challenges and potentials of various rehabilitation type careers.

---

**Back to [Course Descriptions](#)**

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The Graduate Bulletin

Revised: April 2010

## **SCIED Science Education**

### **SCIED-501 Science Education Methods (3 cr.)**

Fall

Methods of teaching science; theories and applications, issues and trends. Benchmark I Completed.

### **SCIED-560 Science Education Curriculum and Assessment (3 cr.)**

Fall

Curriculum and assessment for teaching science; theories and applications, issues and trends. Benchmark I Completed.

### **SCIED-609 Student Teaching – Science Education (8-16 cr.)**

Spring

Student teaching experiences in science education. Benchmark I Completed.

### **SCIED-610 Biology Student Teaching (4-16 cr.)**

Fall, Spring and Summer

Student teaching experience in biology. Benchmark II Completed.

### **SCIED-611 Chemistry Student Teaching (4-16 cr.)**

Fall, Spring and Summer

Student teaching experience in chemistry. Benchmark II completed.

### **SCIED-612 Physics Student Teaching (4-16 cr.)**

Fall, Spring and Summer

Student teaching experience in physics. Benchmark II completed.

### **SCIED-613 Broadfield Science Teaching Internship (4-16 cr.)**

Fall, Spring and Summer

Internship experience in teaching broadfield science. Benchmark II completed.

### **SCIED-614 Biology Teaching Internship (4-16 cr.)**

Fall, Spring and Summer

Internship Experience in teaching biology. Benchmark II completed.

### **SCIED-615 Chemistry Teaching Internship (4-16 cr.)**

Spring

Internship experience in teaching chemistry. Benchmark II Completed.

### **SCIED-616 Physics Teaching Internship (4-16 cr.)**

Fall, Spring and Summer

Internship experience in teaching physics. Benchmark II completed.

**SCIED-688 Internship Teaching – Science Education (8-16 cr.)**

Spring

Alternative to student teaching experience: licensed and salaried internship in a cooperating school. Benchmark II Completion.

**SCIED-710 Current Topics in Science for Teachers (3 cr.)**

Summer

Current topics, issues and events in the field of science and how they might be incorporated in the curriculum and instruction of science courses.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: March 2009

## **SCOUN School Counseling**

### **SCOUN-501 Introduction to Guidance (2 cr.)**

Fall, Spring and Summer

Policies and practices of organized guidance programs in educational settings; historical, philosophical and cultural bases for guidance services; guidance techniques for teachers; cooperative efforts of teachers, parents and counselors.

### **SCOUN-600 Workshop: Counseling/Psychological Services (1-3 cr.)**

Fall and Summer **R**

### **SCOUN-605 Emerging Issues in School Counseling (2 cr.)**

Fall, Spring and Summer

Identify, explore and research issues and trends impacting practice and resources in school counseling. Student must be currently employed in a school setting or licensed to work in schools.

### **SCOUN-647 Emotional and Behavioral Problems of Children and Adolescents (3 cr.)**

Spring and Summer

Assessment, identification and evaluation of emotional and behavioral disorders of learners middle childhood through adolescence, including methods of observing, diagnosing, documenting and interpreting. Characteristics of emotional and behavioral disabled learners, including potential concomitant physical, cognitive, or sensory disabilities and psychological, social and environmental factors contributing to childhood emotional and behavioral disorders.

### **SCOUN-705 Play Therapy (2 cr.)**

Fall, Spring and Summer

Study of play therapy theory, research, and utility in school and clinical settings. Application of play-based assessment, treatment planning, and therapeutic skills through supervised laboratory experience.

### **SCOUN-727 Supervision of Pupil Services (1 cr.)**

Theories, strategies and models of school-based supervision of school counseling and school psychology students. Ethical guidelines, best practice strategies, supervisory roles, and supervision standards for individuals responsible for supervising practicum students and interns are addressed. Not intended for use in degree program. Prerequisite: Instructor approval

### **SCOUN-733 Lifespan Career Development (3 cr.)**

Fall and Summer

Study and application of career development and theories from a lifespan perspective. Examination of established and emerging labor markets, economic and social forces likely to impact career development and choice. Access, implementation, and evaluation of information systems. Application of assessment tools and techniques.

**SCOUN-735 Problems in Counseling and Psychological Services (2 cr.)**

Plan B investigations are the primary purpose of this course. Students who are ready to write their Plan B paper should register for this course and then confer with the major advisor to select a staff member who will serve as an investigation adviser. Meetings with the advisor are by arrangement only. \$

**SCOUN-738 Guidance in the Elementary School (2 cr.)**

Spring and Alternating Summers

Nature and conditions of guidance in elementary schools; curricular and non-curricular guidance techniques, referrals, parent counseling; guidance principles and practices applied to elementary school child.

Prerequisites: take COUN-675.

**SCOUN-760 Theories and Techniques of Behavior Modification (2 cr.)**

Fall and Spring

Theoretical and empirical bases for utilizing behavior modification procedures in schools, clinics and other institutions. Emphasizes role of behavioral consultant.

Prerequisites: take PSYC-530 or PSYC-730.

**SCOUN-765 Professional Orientation: School Counseling (3 cr.)**

Spring and Alternating Summers

Orientation to school counseling history, professional roles and functions, and programming models. Credentialing processes, professional organizations, public policies related to school counseling.

Prerequisites: take COUN-750.

**SCOUN-770 Thesis (2-6 cr.)**

Fall, Spring and Summer

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4 or 6 semester hours of credit in various terms with a final total of six. Consent of program director.

Prerequisites: take EDUC-740. R\$

**SCOUN-782 PK-12 Developmental Guidance Curriculum (3 cr.)**

Strategies and techniques for designing and delivering PK-12 developmental guidance curriculum. National and state student standards and benchmarks as framework for curriculum design. Instructional and facilitation strategies, classroom management, evaluation processes for elementary, middle, and high school group/classroom guidance. Admission to the MS in Guidance and Counseling program.

Prerequisites: take COUN-750 and SCOUN-765.

**SCOUN-787 Career/Occupational Placement and Transitions (2 cr.)**

Spring and Summer

Theories, design, development, and implementation of career, school to work, and occupational placement systems in PK-12 schools, post-secondary schools, public and private agencies.

Prerequisites: take SCOUN-733.

**SCOUN-788 School Counseling Practicum (2-3 cr.)**

Fall and Spring



Application of individual, small group, and large group guidance and counseling techniques in school setting. Supervised practice for a minimum of 100 hours on site, with additional campus-based supervision.

Prerequisites: take COUN-750, COUN-788.

**SCOUN-789 Elementary School Counseling Internship (3-6 cr.)**

Practical experience in school counseling in a K-8 school setting for a minimum of 300 hours. Application of counselor competencies and utilization of professional school counseling skills under supervision. Instructor's signature required.

Co-requisite: SCOUN-793.

**SCOUN-790 Secondary School Counseling Internship (3-6 cr.)**

Fall and Spring

Practical experience in school counseling in a 9-12 school setting for a minimum of 300 hours. Application of counselor competencies and utilization of professional school counseling skills under supervision. Instructor's signature required.

Co-requisite: SCOUN-793.

**SCOUN-791 Internship in Guidance and Counseling (6 cr.)**

Fall and Spring

The student will devote a minimum of 360 hours, full-time (each quarter) in a local school serving as a school counselor. In this experience, they will be supervised by university personnel and work with a fully certified local school counselor. Experiences include all aspects of the guidance function.

Prerequisites: take SCOUN-790. **R**

**SCOUN-792 Post-Secondary Career Counseling Practicum (3 cr.)**

Closely supervised career counseling experience at a postsecondary career counseling center.

Prerequisites: take SCOUN-733, SCOUN-787.

**SCOUN-793 School Counseling Internship Seminar (2 cr.)**

Case consultation and group supervision activities to accompany field-based application of school counseling knowledge and skills.

**SCOUN-892 Advanced Counseling Practicum (2 cr.)**

Fall, Spring and Summer

Clinical supervised counseling experiences in a variety of school institutional and agency settings. Designed to assist the student to more adequately understand and apply the dynamics of human behavior in the one-to-one counseling relationship. A minimum of 60 to 90 clock hours of experience is required.

Prerequisites: take SCOUN-790. **R**

**SCOUN-895 Field Study(2-6 cr.)**

Fall, Spring and Summer

Experience in action-type field research in pupil personnel services. The student will identify and research a topic directly related to his career position. Preparation and presentation of a formal report of the study to appropriate personnel. Student may enroll for 2, 4 or 6 semester hours of credit in various terms with a final total of six. **R \$**

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: July 2008

## **SOC Sociology**

### **SOC-525 Sociology of Leisure** (3 cr.)

Fall and Spring

Institutional approach to effects of leisure on social structure; values reflected in leisure; problems with increase in leisure resources.

### **SOC-540 Sociology of Work** (3 cr.)

Fall and Spring

Human behavior in various types of employment and occupations; trends in U.S. occupational structure.

### **SOC-550 Sociology of Hmong Culture** (1 cr.)

Sociological overview of Hmong cultural values, history, immigration and resettlement experiences, family and clan functions, and spiritual beliefs and practices. \$

### **SOC-560 Sociology of Juvenile Delinquency** (3 cr.)

Fall and Spring

Theories of delinquency, criminal behavior, and social control in relation to modern institutions in American culture.

### **SOC-610 Sociology of Thailand's Minority Groups: Study Abroad Program** (4 cr.)

Summer

Study abroad program to Thailand. In-depth experiential learning of Thai minority cultures, including religions, socio-political status, Buddhism, health, education, trafficking of women and children, limited citizenship status, and poverty. Field trips to villages, non-governmental agencies, schools, and clinics.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: January 2007

## **SPCOM** Speech Communication

### **SPCOM-508 Speech Skills For Business and Industry** (2 cr.)

Fall, Spring and Summer

Technical speaking; projects in application of speech skills and activities in business and industry.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Reviewed: February 2007

## **SPED Special Education**

### **SPED-500 Introduction to Individuals With Cognitive Disabilities (3 cr.)**

Fall

Introduction to etiology of mental retardation; psychological, educational, social and vocational aspects; adjustment techniques used in working with mentally retarded persons.

### **SPED-501 Learning Disabilities (3 cr.)**

Spring

Identification, remediation and evaluation of learning disabled; intervention techniques used with adolescents and adults.

### **SPED-505 Introduction to Early Childhood Special Education (2 cr.)**

Summer

Introduction to the history and purpose of Early Childhood - Special Education programming, legislation, population receiving services, family intervention, intervention models and issues.

Prerequisites: SPED-430 or SPED-630.

### **SPED-510 Methods, Materials and Curriculum for the Exceptional Child (3 cr.)**

Fall

Curricular and methodological adaptation for young children with exceptional educational needs in the areas of social-emotional development, manipulative and motor skills, self-help skills, communication, cognitive development, and creative expression.

Prerequisites: SPED-505; Admission to Early Childhood -- Special Education Certification Track.

### **SPED-515 Early Childhood Special Education Programming (3 cr.)**

Spring

Organization and implementation of Early Childhood Special Education programs, including service delivery, program models, consultation and collaboration, and intervention agents.

Prerequisites: SPED-505, SPED-510.

### **SPED-518 Introduction to Teaching/Assessment in Special Education (2 cr.)**

Fall, Spring and Summer

Provides one-on-one, supervised experience in teaching youth with exceptional education need (EEN). Provides the initial opportunity for the student to teach a young person with EEN in a supervised setting for 50 hours.

### **SPED-520 Early Childhood Exceptional Educational Needs Assessment (2 cr.)**

Summer

Assessment and diagnosis of the young child with a suspected disability. Norm reference, criterion referenced, and play-based assessment in the following areas:

cognitive, motor, speech/language social/emotional, and family.

Prerequisites: SPED-515; Admission to Early Childhood -- Special Education Certification Track.

**SPED-522 Curriculum and Instruction: Functional Living Skills (2 cr.)**

Spring

Curriculum and instructional techniques for developing basic functional living skills for persons with cognitive disabilities, borderline and severe. Prerequisites: SPED-500, SPED-630.

**SPED-523 Mild Disabilities: Social Studies and Science (3 cr.)**

Fall and Spring

Curriculum and methods of teaching students with mild cognitive, learning, and emotional/behavioral disabilities in the content areas of social studies, science, and in general education. Strategies that facilitate integration, improve maintenance and generalization of skills, promote transitions, increase self-awareness and self-management, and compensate for learning deficits.

**SPED-524 Curriculum and Instruction: Career and Transition Education (3 cr.)**

Fall

Curriculum and instruction for persons with cognitive disabilities, borderline and severe, in prevocational career, vocational education, and transition stressing interdisciplinary cooperation.

Prerequisites: SPED-500, SPED-630.

**SPED-526 Pre-Student Teaching: Cognitive Disabilities (2 cr.)**

Fall

Supervised experience in observing, planning instruction, and teaching children and youth with cognitive disabilities in a cross-categorical school environment. Repeatable three times for credit. **R**

**SPED-528 Assessment for Individual Education/Transition Plans (3 cr.)**

Fall, Spring and Summer

Diagnosing behavior and learning problems of students with exceptional education needs. Preparing individual educational and transitional plans based on comprehensive assessments.

Prerequisites: REHAB-620.

**SPED-530 Introduction To Communication Disorders (3 cr.)**

Fall

Nature, causes of and methods used when working with individuals who have speech and language disorders.

**SPED-538 Pre-Student Teaching: Children and Youth With Disabilities (2 cr.)**

Fall, Spring and Summer

Supervised experience in observing, planning instruction, and teaching children and youth with disabilities in a cross-categorical school environment.

**SPED-600 Workshop: Topics in Special Education (1-3 cr.)**

Summer

Current specialized topics studied through experiential activities.

**SPED-620 Schools, Families and Community Collaboration (3 cr.)**

Theory, general principles and procedures for fostering collaborative partnerships among families, professionals, students and other service providers. Focuses on families with children who have disabilities.

**SPED-640 Diagnosis and Remediation of Literacy and Math Disabilities (4 cr.)**

Curriculum, methods, assessment and remediation of teaching reading, math, and language to individuals with mild disabilities. Strategies that assess and evaluate, monitor progress, increase, maintain and generalize skills, facilitate integration, and compensate for learning deficits in the general and special education curricula.

Prerequisites: EDUC-580, EDUC-581, and EDUC-582

**SPED-630 Inclusion of Students With Exceptional Needs (3 cr.)**

Fall, Spring and Summer

Inclusion of students with exceptional educational needs in the regular classroom setting. Laws, definition, characteristics, adaptations, strategies and transitional services that pertain to persons identified with: cognitive disability, learning disability, attention deficit hyperactivity disorder, emotional disability, autism, traumatic brain injury, speech and language disorders, visual and hearing loss, physical and other health impairments, and gifted and talented.

**SPED-647 Emotional and Behavioral Problems of Children and Adolescents (3 cr.)**

Spring and Summer

Assessment, identification and evaluation of emotional and behavioral disorders of learners middle childhood through adolescence, including methods of observing, diagnosing, documenting and interpreting. Characteristics of emotional and behavioral disabled learners, including potential concomitant physical, cognitive, or sensory disabilities and psychological, social and environmental factors contributing to childhood emotional and behavioral disorders.

**SPED-662 Classroom Management Techniques (3 cr.)**

Spring

Techniques for motivating handicapped youth, individual and group discipline, behavior modification, educational organization, evaluation, and communication to enhance learning.

**SPED-682 Student Teaching Early Childhood-Special Education (8 cr.)**

Directed teaching and community experiences in selected infant-toddler, preschool, or school based programs for children with disabilities. Admission to Early Childhood -- Special Education Certification Track.

Prerequisites: SPED-520, SPED-630.

**SPED-689 Intern Teaching Early Childhood-Special Education (8-16 cr.)**

Directed teaching and community experiences in selected infant, toddler, preschool, or primary school-based programs for children with disabilities.

Prerequisites: SPED-520.

**SPED-690 Behavioral Interventions in the Schools (2 cr.)**

Fall and Spring

Study and practice in Functional Behavioral Assessment and Behavioral Intervention Planning for individualized behavior problems in the PK-12 educational setting using both a direct-service and consultation-collaboration model. Focus on assessment skills to produce data-driven environmental modifications, pro-social replacement behaviors, consequence strategies, and home-school interventions.

**SPED-799 Independent Study** (1-3 cr.)

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: November 2007



## **SPSY School Psychology**

### **SPSY-690 Behavioral Interventions in the Schools (2 cr.)**

Fall and Spring

Study and practice in Functional Behavioral Assessment and Behavioral Intervention Planning for individualized behavior problems in the PK-12 educational setting using both a direct-service and consultation-collaboration model. Focus on assessment skills to produce data-driven environmental modifications, pro-social replacement behaviors, consequence strategies, and home-school interventions.

### **SPSY-701 Seminar: School Psychological Services (2 cr.)**

Summer

Introduction to the field of school psychology. Roles and functions of the school psychologist are explored as they relate to Wisconsin and the nation; political and legal implication of these roles are identified.

### **SPSY-710 Psychoeducational Assessment of Young Children (2 cr.).**

Fall

Assessment of the young child with a suspected disability and his/her family, training in the norm referenced, criterion referenced, and play-based assessment of young children. Prerequisite: SPSY-753.

### **SPSY-727 Supervision in Pupil Services (1 cr.)**

Theories, strategies and models of school-based supervision of school counseling and school psychology students. Ethical guidelines, best practice strategies, supervisory roles, and supervision standards for individuals responsible for supervising practicum students and interns are addressed. Not intended for use in a degree program. Prerequisite: Instructor approval.

### **SPSY-735 Problems in School Psychology (2 cr.)**

Fall, Spring and Summer

Independent investigation into a carefully delineated area of school psychological services in an attempt to bring evidence to bear on a problem. The use of research techniques is required. Reporting of the study is expected to meet the standards appropriate to scholarly writing by professionals in the field. Prerequisite: EDUC-740.

### **SPSY-743 Cognitive Assessment (3 cr.)**

Spring

Supervised practice in the administration, scoring and interpretation of individual tests of cognitive abilities. Emphasis is directed toward the evaluation of intellectual ability, the examination of strengths and weaknesses in cognitive processing, the integration of findings in psycho-educational reports, and intervention planning for individual clients. Prerequisites: take SPSY-753, SPSY-753B.

**SPSY-745 Assessment of Personality (Projective Techniques) (2 cr.)**

Summer

History, theory and methodological consideration and studies of projective instruments. Instruction in administration, scoring, and interpretation of some currently used devices leading to a knowledgeable understanding of the instruments.

Prerequisite: SPSY-743.

**SPSY-753 Psychometric Theory and Application (2cr.)**

Fall and Summer

Introduction to psychoeducational theory and concepts in relation to inter- and intra-individual assessment. Covers basic statistics, in regard to test construction, test uses and misuses, test selection, purposes of testing, ethics, basic test interpretation processes and types of tests and testing programs frequently employed by psychoeducational specialists.

**SPSY-753A School Counseling Assessment Laboratory (1 cr.)**

Fall and Summer

Introduction to assessment materials and techniques employed by school counselors. Individual inventories, aptitude and achievement tests, problem surveys and other student assessment materials.

Prerequisite or corequisite: SPSY-753.

**SPSY-753B Laboratory: School Psychology (1 cr.)**

Fall

Introduction to basic psychometric materials and techniques employed by school psychologists. Emphasis is placed upon individual mental tests and procedures.

Prerequisite or corequisite: SPSY-753.

**SPSY-768 Learning Disabilities: Assessment and Intervention (3 cr.)**

Principles and techniques used in assessing, instructing, and identifying students with academic delays and/or learning disabilities. Historical perspectives, current research, and strategies for students at risk for and with learning disabilities is examined and evaluated. Applied practice in academic interventions and academic assessment techniques is utilized.

Prerequisites: take SPSY-753.

**SPSY-770 Thesis (2-6 cr.)**

Fall, Spring and Summer

Independent research under direction of investigation advisor. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for two, four or six semester hours of credit in various terms with a final total of six. Consent of program director.

Prerequisite: EDUC-740. R

**SPSY-775 School Consultation (2 cr.)**

Spring

Comprehensive overview of theories and processes of psychological and educational consultation. Training in specific consultative skills through use of role-play, feedback, and homework assignments.

**SPSY-777 Legal/Ethical Issues for School Counselors and Psychologists (2 cr.)**

Fall and Spring

Investigation of laws, legal systems, professional ethics, administrative codes, and other legal and ethical issues as applied to professional practice of school counselors and school psychologists.

**SPSY-778 Psychoeducational Disability (3 cr.)**

Fall

Etiology, characteristics, and Individual Educational Program (IEP) development for children with Exceptional Educational Needs (EEN) such as mental retardation, emotional disturbances, behavioral disorders, social/cultural deviation and multi-handicapping conditions.

**SPSY-781 Field Practicum in Psychoeducational Services I (3 cr.)**

Fall and Spring

Provides the prospective school psychologist with the initial "on site" experience of functioning as a school psychologist. Special educational evaluations, programming and introduction to complex cases and staffings.

Prerequisites: SPSY-743, SPSY-768.

**SPSY-782 Field Practicum in Psychoeducational Services II (3 cr.)**

Fall and Spring

Provides continuing "on site" experience of functioning as a school psychologist. Increased applications of expanded assessment skills, more complex diagnostic problems, intervention techniques and leadership roles within the placement setting.

Prerequisite: SPSY-781.

**SPSY-784 Clinical Practicum in Psychoeducational Services I (2 cr.)**

Fall, Spring and Summer

This practicum course is designed to provide more intensive and extensive clinical experiences. Work with pre-school children, post-school young adults, school age children and their parents. Special assessment and intervention techniques are emphasized.

Prerequisites: SPSY-743, SPSY-768.

**SPSY-785 Clinical Practicum in Psychoeducational Services II (2 cr.)**

Fall, Spring and Summer

Provides integrative learning experiences into the role and style of function appropriate to the individual and the profession. Long term therapeutic contacts are required. Experience in one or more areas of specialization is available.

Prerequisite: SPSY-784.

**SPSY-790 Systems-Level Prevention and Intervention (3 cr.)**

School-based prevention and intervention programs to address crises and systems-level needs. Principles of systems-level consultation, organizational change, universal screening procedures, intervention planning, program evaluation, and the analysis of evidence-based programs to promote the health and competence of youth are addressed. Practical experience in planning and evaluating school-based programs.

Prerequisite or Corequisite: SPSY-775.

**SPSY-792 Internship in School Psychology (6 cr.)**

The student will devote a minimum of 360 clock hours, full-time (one quarter) in supervised internship experiences. The student will be working with a certified school psychologist in local area schools and/or other approved personnel in other approved situations; e.g., a counseling psychologist in the APA approved University Counseling Center. R

**SPSY-870 Specialist Thesis in School Psychology (3-6 cr.)**

Independent research project. Selection of a research problem, review and critical analysis of literature and research, development of research plan and methodology, data collection, interpretation of findings and preparation of paper. Thesis orally presented and defended to thesis advisor and committee. Consent of program director. Admission to Ed.S. program required.

Prerequisite: EDUC-740. R

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: September 2009

## **SRVM Service Management**

### **SRVM-546 Seminar in Training and Development** (1 cr.)

Definition and analysis of high performance service management best practices.

### **SRVM-620 International Service Concepts** (3 cr.)

National and cultural constraints and expectations that impact planning, execution and evaluation of service quality. Cultural, business, managerial, and behavioral foundations supporting success in an international service context.

### **SRVM-621 Customer Interaction Center Management** (3 cr.)

Introduction to evaluation, design, maintenance, and management of online telephone technology to provide customer service solutions for industry in customer interaction centers.

### **SRVM-681 Special Problems in Service Management** (1-3 cr.) **R**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Reviewed: April 2009

## STAT Statistics

### **STAT-520 Statistical Methods 3 cr.**

Fall and Spring

Methods of describing data: graphical methods, numerical summary measures, exploratory data analysis. Probability, probability distributions, expected value. Sampling distributions. Statistical inference: estimation and hypothesis testing for one-sample and two-sample problems. Regression analysis. Demonstrating with standard statistical software packages.

### **STAT-640 Advanced Linear Modeling-Regression and Time Series Analysis 3 cr.**

Fall

Multiple regression, inference about regression parameters, remedial regression measure, quantitative and qualitative regression, model selection/validation, nonlinear regression, neural networks, logistic and Poisson regression, generalized linear models, time series, smoothing, stochastic time series, moving average and autoregressive models, autoregressive integrated moving average (ARIMA), estimating and forecasting with time series. Instructor's consent required.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: June 2009

## **STMED Science, Technology and Mathematics Education**

### **STMED-601 Capstone: Mathematics and Science Education (1 cr.)**

Synthesis of material learned in the math and science education programs and study of educational research, evidence-based practice, and professional development.

Prerequisite: Benchmark I completed.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Reviewed: August 2010

## **SUST Sustainability**

### **SUST-515 Sustainable Engineering (3 cr.)**

Impact of engineering and design/manufacturing decisions on the environment. Topics include: sustainability, energy and material flows, risk assessment, multi-use product life cycles, manufacturing process waste streams, sustainable product design issues, end-of-life product handling, and pollution prevention techniques.

### **SUST-632 Global Sustainability Experience in Design and Manufacturing (3 cr.)**

Cross-disciplinary exploration of ecologically friendly design, engineering, manufacturing, and business models. International travel component with corporate, cultural, academic, and civic leaders. Cultural, economic and political influences; product design; manufacturing; sustainability; application of current eco-friendly product design models; research topics; regional global visitation; studio and laboratory experiences; project and presentation.

### **SUST-730 Sustainable Futures (3 cr.)**

Concepts of sustainable design and development. Explores methods/tools for assessing sustainable products and processes from economic, environmental, and societal perspectives. Policy and regulatory impact and cost benefit analysis. Industrial applications exploration through case study analysis.

---

**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Reviewed: September 2009



## **TECED Technology Education**

### **TECED-525 Technology for Elementary School Children 2 cr.**

Fall, Spring and Summer

Development, philosophy, objectives and course organization for industrial arts for the elementary schools. Suitable laboratory work in woods, metals, plastics and drawing.

### **TECED-530 Implementing Technology Education 3 cr.**

Fall, Spring and Summer

Converts the theory of contemporary technology education programs into instructional materials, facilities, and strategy suited to the secondary and post-secondary school.

### **TECED-533 Planning Technical/Vocational Laboratories 2 cr.**

School shop facility planning: equipment selection, placement, care and management.

### **TECED-540 Middle School Technology Education 2 cr.**

Fall, Spring and Summer

Reviews trends and activities in the technology education movement to update instructors to teach middle school offerings.

### **TECED-575 Workshop: 1-3 cr.**

Current specialized topics in industrial education through experiential activities. Instructor's consent required.

### **TECED-603 Activities in Technology/Vocational Education 2 cr.**

A study and design of learning activities for industrial and vocational education. Learning activities will be developed on selected levels of the cognitive, psychomotor, and affective domains to carry out stated behavioral objectives. An evaluation of the appropriateness of learning activities as presented in contemporary curriculum projects.

### **TECED-631 Field Trips to Industry 1-3 cr.**

Opportunities are provided for industrial and vocational education majors as well as teachers to accumulate information about industries through local and distant on-site

visits to industries. A third credit may be earned by showing evidence of application of data collected in courses being taught. R \$

**TECED-637 Organization/Management of Technical Laboratories 2 cr.**

Summer

Experience in administration, project development and teaching problems associated with industrial education.

**TECED-638 Course Construction 2 cr.**

Spring and Summer

Directed experience in curriculum development and course of study construction for industrial education teachers; development of behavioral objectives and of instructional materials to help reach these objectives; development of course of study, instructional package/unit of instruction.

**TECED-704 History/Philosophy Technology Education 2 cr.**

Fall and Summer

Evolution of modern industrial education through the people, movements, events and institutions that contributed to its formation. Developments and conditions in education and society also considered plus their relationship to the theory and practices of industrial education throughout the years.

**TECED-708 Issues in Technology Education 2 cr.**

Spring and Summer

A seminar dealing with selected current issues in industrial arts. Developments of abilities to develop a position and defend it, to be critical without being offensive, and to be professional in an emotional atmosphere.

**TECED-710 Curricular Innovations in Technology Education 2 cr.**

Summer

Study of current innovative programs and practices in the teaching of industrial arts.

**TECED-735 Problems in Industrial/Technology Education 2 cr.**

Fall, Spring and Summer

Identification, selection, and the completion of a problem in industrial education, culminating in a Plan B paper.

**TECED-739 Introduction to Research in Vocational/Technology Education 1 cr.**

Fall and Spring

Study of selection criteria for advanced technical problems in industry and technology, development of techniques appropriate to attacking these problems, identification of industries and organizations relating to these problems and preparation of a detailed proposal to explore a particular problem. Students should enroll for this course during their first graduate enrollment and plan to take the appropriate "problems" course during their next enrollment.

### **TECED-746 Seminars in Technology Education 1-3 cr.**

Identifying goals and outcomes for the local school; development of immediate and long-range curriculum plans; cooperating with local school administrative units in planning for improvement; use of the new Wisconsin curriculum guide for industrial education; initial preparation of individual courses of study for the local school program using behaviorally stated objectives.

### **TECED-770 Thesis -- Industrial/Technology Education 2-6 cr.**

Fall, Spring and Summer

Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for two, four or six semester hours of credit in various terms with a final total of six.

Prerequisite: EDUC-740.

### **TECED-775 Workshop 1-3 cr.**

Fall, Spring and Summer

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop. R

### **TECED-798 Field Experience 1-2 cr.**

Fall, Spring and Summer

### **TECED-895 Field Study in Industry and Technology 2-6 cr.**

A study which provides the graduate student with the opportunity to: 1) explore in-depth the body of knowledge associated with his substantive teaching field in industry and technology, 2) provide an educational experience for implementing this knowledge into the classroom situation, and 3) devise methods to determine if this methodology has brought about desired behavioral changes.

The Graduate Bulletin  
Revised: February 2007

## **TECH Technology**

### **TECH-532 Futures of Technology 2 cr.**

Fall

Concepts of future studies as applied to technology. Exploration of possible alternatives. Techniques and skills for the professional user and the citizen consumer.

### **TECH-540 Future of Work 1-2 cr.**

Future possibilities as to why people work, who will work, and in what conditions. Project probable work parameters from current trends. Relate past, present, and future to students' individual work situations.

### **TECH-733 Impacts of Technology 2-3 cr.**

Fall and Summer

A contemporary, historical and futuristic look at some of the economic, sociological, psychological and political implications of industry and technology. Students will identify and investigate several impacts of industry/technology to show depth of understanding and relationships between them.

### **TECH-775 Epistemology of Technology 3 cr.**

Summer

The nature, sources, and parameters of knowledge, in this instance technology, and its relationship to other organized bodies of knowledge. R

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: February 2007

## **TRANS Transportation/Energy**

### **TRANS-595 Seminar (1-2 cr.)**

Specific content is designed to upgrade competencies of participants. Content will change to reflect current state of the art in transportation. **R**

### **TRANS-735 Problems in Transportation/Energy (2-6 cr.)**

Substantive study and activity for specialists in the transportation/energy field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant in transportation/energy. Preparation of a technical report. May be repeated for a maximum of six semester credits.

### **TRANS-792 Special Projects in Transportation/Energy (2-6 cr.)**

Substantive study and activity for specialists in the transportation/energy field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant in transportation/energy. Preparation of a technical report. May be repeated for a maximum of six semester credits.

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin  
Revised: July 2008

## **TRHRD Training and Human Resource Development**

### **TRHRD-560 Training Systems in Business and Industry 3 cr.**

Fall, Spring, Summer and Winter

Types and purpose of training as related to business and industry. Training analysis, content, delivery systems, evaluation and justification for training. Designed for non-education majors.

### **TRHRD-570 Training Methods in Business and Industry 2 cr.**

Fall

Identification of training situations where the development and delivery of training is needed. Emphasis is on methods to deliver a training session. Students will be required to make training sessions presentations.

### **TRHRD-575 Workshop 1-3 cr.**

Fall, Spring and Summer

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop. **R**

### **TRHRD-589 Training Internship 1-8 cr.**

Fall, Spring, Summer and Winter

Opportunities for students to learn and practice training management and instructional techniques through activities and experiences in a training department. Objectives commensurate with student's background and field of training. Activities include designing and implementing training programs in student's major or minor field of study in either industry, business, military or government training programs.

Prerequisites: take TRHRD-560. **R**

### **TRHRD-600 Workshop 1-3 cr.**

Fall, Spring or Summer

Special topics in training and human resource development providing hands-on or experiential learning activities. Specific content and title to reflect topic of the workshop. **R**

### **TRHRD-730 Training Design and Evaluation 3 cr.**

Fall and Spring

The systems approach to the design and evaluation of training modules in a business training context, including performance problem analysis, writing training objectives, conducting a training analysis, selection, design and evaluation of training methods, media and materials. Students design and evaluate a training module using principles taught in the course.

Prerequisites: take TRHRD-560 and CTE-534.

### **TRHRD-735 Field Problem in Training and Development 4 cr.**

Fall, Spring, Summer and Winter

Identification of a training and development research problem in business and industry. Review of related research, selection of appropriate methodology, completion of research procedures, analysis of results and formulation of conclusions, recommendations and implications for practice. Final product is a written research report.  
Prerequisites: take INMGT-700.

**TRHRD-740 Management and Coordination of Training and Development 3 cr.**

Spring

Principles and processes necessary to effectively manage and coordinate the training function in business and industry. Topics include strategic planning, responsibilities and tasks of managing training projects, facilities planning, legal and ethical considerations in training, and trends in the training and development field.

**TRHRD-746 Seminar in Training and Development 1 cr.**

Fall

Special topics on current developments in training and development. Each seminar is devoted to a specific issue to be indicated with subtitle and description. **R**

**TRHRD-775 Workshop 1-3 cr.**

Fall, Spring and Summer

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop. **R**

**TRHRD-789 Internship in Training and Development 2-8 cr.**

Fall, Spring and Summer

Opportunities for students to use competencies in analyzing training needs, design training, delivering training and evaluating training in an organization. Course objectives commensurate with student's knowledge, skills, experience and interests.

Prerequisites: take CTE-534, TRHRD-730 and MEDIA-710. **R**

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**Back to [Course Descriptions](#)**

---

The Graduate Bulletin

Revised: May 2009